Book of abstracts of the
COST Action 866 conference

Green care in Agriculture:
Health effects, Economics and Policies

20-22 June 2007
Vienna, Austria

Hosted by:
Austrian Horticultural Society

Edited by: Bjarne O. Braastad and Hilde Hauge
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Sponsors:
Natur im Garten, Niederösterreich
Federal Ministry of Agriculture, Forestry, Environment and Water Management
Raiffeisen Meine Bank
Uniqqa
Wiener Stadtgartenamt
Programme

June 20th, 2007
Location: Berufsschule für Gartenbau und Floristik, Donizettiweg 31, 1220 Wien

08.30 Start of registration
09.20 Short film about Vienna

Plenary sessions

09.30 Welcome and information on COST Action 866 by Bjarne O. Braastad, Welcome addresses by Peter Fischer-Colbrie, Austrian Horticultural Society; and by Michael Häupl, Mayor of Vienna (to be confirmed)
10.00 Farming for health across Europe. Jan Hassink, Wageningen University, the Netherlands
10.25 Education for sustainable development - an investment in the future. Implementation strategies in schools. Inge Schenk, German Horticultural Society, Germany

Health effects of green care

11.00 Information on WG 1. Joe Sempik
11.05 Where Hope Grows: Gardening and Life Challenges. Anita Unruh and Susan Hutchinson, Dalhousie University, Canada
11.50 Attention Restoration Theory: Empirical Work and Practical Applications. Bernadine Cimprich, University of Michigan, USA

12.30-13.30 Lunch

13.30 Green care in the framework of health promotion. Erja Rappe, University of Helsinki, Finland

Economics of green care

13.45 Information on WG 2. Saverio Senni
13.50 Green care farming in the context of multifunctional agriculture. Guido Van Huylenbroeck, University of Gent, Belgium
14.30 Reconfiguring farm resources and territorial capital as resource base for green care activities. Henk Renting, Wageningen University, the Netherlands
14.45 Evaluating the social impact of Green Care enterprises: The social budget. Silvio Franco, Tuscia University, Italy

15.00-15.30 Coffee break

Policies related to green care

15.30 Information on WG 3. Thomas van Elsen
15.35 Concepts of green care in a social farm in relation to social policies in Northern Germany. History, present situation and future aspects. Hartwig Ehlers, Weide-Hardebek Farm, Germany
16.15 Pathways of change in social farming: how to build new policies. Francesco Di Iacovo, University of Pisa, Italy
16.30 The diversity of care farms and their multifunctionality – contributions and perspectives for nature and landscape development. Thomas van Elsen, FiBL, University of Kassel, Germany
Programme

Roundtable discussion  Chair: Bjarne O. Braastad and Christos Gallis

17.00-18.15 Interdisciplinary cooperation in green care research; challenges and solutions. Discussion among national and international experts

19.30-- Welcome Reception at the Federal Ministry of Agriculture, Forestry, Environment and Water Management
Short welcoming remarks: Minister of Agriculture, Forestry, or representative of the Federal Ministry of Agriculture, Forestry
• Buffet meal

June 21st, 2007

Workshops in WGs, parallel sessions:

Working Group 1 – Health effects of green care  Chair: Joe Sempik

Empirical and experimental results and approaches in the study of green care

08.25 Chairman’s Introduction to the day’s session (10 minutes)
08.35 Monitoring patient progress at the healthcare farm ‘De Hoge Born’: preliminary results from the first phase. Erik Baars, Jan Hassink and Marjolein Elings, Louis Bolk Instituut, Driebergen and Wageningen University, The Netherlands
08.55 Selecting approaches and methods for researching Green care. Joe Sempik, Loughborough University, UK
09.15 Animal-assisted therapy: effects on persons with psychiatric disorders working with farm animals. Bente Berget, Øivind Ekeberg and Bjarne O. Braastad, Norwegian University of Life Sciences and University of Oslo, Norway
09.35 Mental fatigue – a perspective on stress. Louise Nordgaard and Mette Kraag, University of Southern Denmark
09.55 Effects of green-care farms on quality of life of people with a psychiatric and/or addiction history. Future research challenges on green care farming Marjolein Elings, Plant Research International, Wageningen University and Research Centre, The Netherlands

10.15 – General Discussion – 15 minutes
10.30

10.30 to 10.45 short break (15 minutes)

Observations on the state of practice of green care

10.45 Very brief introduction to the theme (5 minutes)
10.50 How to be a care-farmer for € 73: a shareholder survey of the Fordhall Community Land Initiative (UK). John R Hegarty, Keele University, UK
11.10 Care farming in the UK – Recent research findings on i) the scope and range of Care Farms in the UK and ii) pilot study on the psychological health and well-being benefits of care farming in the UK. Rachel Hine, University of Essex, UK
11.30 – Discussion of previous two presentations
11.45
Qualitative observations and the development of practice in green care

11.45 Very brief introduction to the theme (5 minutes)
11.50 Animal assisted therapy, pedagogics and activities with farm animals. Luisa Demattio and Silke Scholl, Austrian Council for Agricultural Engineering and Rural Development, Austria
12.10 The correlation effect of horticultural activities – the influence of working with plants on human experiences. Konrad Neuberger, Association Horticulture and Therapy, Wuppertal, Germany

12.30 – 13.30 Lunch

Qualitative observations on the practice and benefits of green care (cont.)

13.30 Intensive rural programmes and the unmet need for personality disorder programmes. Rex Haigh and Yolande Hadden, Thames Valley Axis Two Institute, UK
13.50 Effects as stimulation for development of the Green Programme in CUDV Draga, Ig, Slovenia. Irena Borštnik, Draga, Slovenia
14.10 A garden for Horticultural Therapy. Giorgio Guerani, Cristiana Mangiacapra, Paola Canci and Daniela Turan, Hospital “G.B. Grassi” Azienda USL Roma D, Italy
14.30 – Discussion on qualitative observations on practices and benefits
15.00 (30 minutes)

15.00 – 15.30 Coffee break (30 minutes)

Theoretical and Conceptual Frameworks

15.30 – A theoretical framework and conceptual model of green care: presentation of the report of COST action members and discussion and amendments
16.30 – Final Discussions
17.00

Working Group 2 – Economics of green care  Chair: Saverio Senni

08.30 Introduction by WG2 Chair and self presentation of participants
09.00 Researching the business ideas of Finnish green care farms. Anja Yli-Viikari, Elina Vehmasto, Taina Lilja, Tapani Koivinen and Leena Rantamäki-Lahtinen, MTT Agrifood Research Finland, Finland Futures Research Centre
09.20 The creativity in green care activities. Anna Kirveennummi and Katariina Heikkilä, Finland Futures Research Centre
09.40 Social enterprise, farms and care in rural England. Stephen Parsons, Harper Adams University College, UK
10.00 Discussion
10.20 Green care and social enterprises in Italian agriculture. Francesca Durastanti, Silvio Franco and Saverio Senni, Tuscia University, Italy
10.40 Discussion

11.00-11.15 Coffee Break

11.15 Discussion on the three presentations given in the plenary
Programme

12.30-13.30    Lunch

13.30    Discussion on an Agenda of relevant topics related with the WG2

15.00-15.30   Coffee break

15.30-17.00  Continue the discussion on the Agenda. Final discussions

Working Group 3 – Policies related to green care    Chair: Thomas van Elsen

08.30    Reflecting the Brussels meeting and introduction to our tasks in Vienna. Thomas van Elsen, Bas Pedroli and Jan Hassink

08.40    Green Care policies in Austria. Georg Wiesinger, Federal Institute for Mountainous and Less-Favoured Areas, Austria

08:55    Conceptualisation of the regional net of social farms. Katja Vadnal, Jan Ulaga and Valerija Bužan, University of Ljubljana, Slovenia

09.10    Analysis of social farming in Germany: outcomes of the national meeting. Marie Kalisch and Thomas van Elsen, FiBL, University of Kassel, Germany

09.25    Living Learning -The farm as a pedagogical resource. Linda Jolly, Norwegian University of Life Sciences, Norway

09.40    Discussion of presentations

10.00    Coffee break

10.30    Health and Care Park Hengelo (NL). Hans ter Beek and Günter Schwandt, ‘op ten noort blijdenstein’- architects, The Netherlands

10.45    Science and policy of Farming for health. Elsa Fjeldavli and Torill Meistad, Centre for Rural Research, Norway

11.00    Chances for social farming due to changing paradigms in health care. Jan Hassink, Marjolein Ellings and Dorit Haubenhofer, Plant Research International, Wageningen UR, The Netherlands

11.15    Education in Green care. A first European overview of the provision in education and training for Green care workers. Bas Pedroli and Olga Travkina, Alterra, Wageningen UR, The Netherlands

11.30    Discussion of presentations

11.50    Round table contributions: Short presentations of other participants of the workshop.

12.30-13.30    Lunch

13.30-15.00   Thematic discussions:

- Francesco Di Iacovo (process owner): "Inventory of policies"

- Roberto Finuola and Francesco Di Iacovo (process owners): "100 ideas for development of green care"

- Thomas van Elsen and Jan Hassink (process owners): "Design process of change"

- Bas Pedroli (process owner): “Ideas concerning a new research proposal”
Programme

15.00-15.30 Coffee break

15.30-17.00 Continuing discussions and outlook to future activities

Poster session

17.00-18.00 Poster viewing in the Museum for Horticulture
(presenters present, posters open all day)

17.30-18.30 Management Committee meeting of COST Action 866

19.00-- Garden party at the headquarters of the Austrian Horticultural Society

June 22nd, 2007

Excursions

08.00-09.00 Management Committee meeting (if needed)

08.00 Departure of tour 1
08.30 Departure of tour 4
09.00 Departure of tour 3
10.00 Departure of tour 2

18.30 Closing at the Heuriger
Farming for health across Europe

Hassink, Jan

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Introduction
Participants from twelve European countries have written a state of the art concerning farming for health in their country in 2005. In the Social Farming project, more detailed information was collected in seven European countries in 2006 and 2007. This paper gives an overview of the present situation and diversity of farming for health across Europe.

Different categories of farming for health
The term farming for health comprises a wide spectrum of different kinds of social farming in different countries. The following categories can be distinguished:

- Green care farms represent a working environment where a diversity of target groups is performing meaningful activities
- Horticultural therapy, therapeutic horticulture and healing gardens and healing landscapes. Plants, horticulture, gardens and landscapes are used in therapy or in a recreative setting in order to improve well-being or to reach pre-defined goals
- Animal assisted therapy, education and activities. Animals are used in therapy or in a recreative or educational setting in order to improve well-being or to reach pre-defined goals.

Green care farms
It is striking that in all countries initiatives for green care farms have mainly been initiated by farmers and not by health institutions. Green care farming started as a bottom-up process. Apparently, farmers’ objectives form the main driving force for the development of green care and not the demands of the health sector.

Different categories of green care farms are distinguished in Italy, Slovenia, Austria, Belgium and the Netherlands. In all these countries the categories are mainly related to the balance between care and agricultural production. A distinction can be made between the more care oriented farms and the more agricultural production oriented farms. Different terminologies are used for this distinction: family farms versus social coops in Italy, traditional household-based schemes versus nursing places in Austria; independent farms cooperating with health institutions versus institutional farms in Belgium, the Netherlands and Slovenia.

There is also a diversity in target groups. In Norway children and psychiatric clients are dominant, in Switzerland and Sweden vulnerable children. The experiences in Belgium, the Netherlands and Italy show that green care farms can be a good provision for a diversity of target groups like people with mental problems, people with an addiction history, elderly with dementia, autistic persons, long term unemployed, people with burn out and prisoners.

In the Netherlands, Belgium and Norway national networks of green care farmers have been set up. In Italy the network is being created and a structure for starting a supporting system has been developed in Poland.

The most extensive supportive structure for green care farmers has been developed in the Netherlands; this includes a national support centre, association of green care farmers, regional associations of green care farmers and study groups of green care farmers.
Plenary sessions

Horticultural therapy (HT), therapeutic horticulture (TH) and healing gardens and healing landscapes

Gardening as a therapeutic activity is significant in the UK (with more than 800 projects), Germany (part of work therapy in 400 hospitals and rehabilitation centers) and Austria where horticultural therapy is widely used in hospitals, nursing homes, vocational training institutions, schools and day centres. Initiatives for HT, TH, healing gardens and healing landscapes are usually taken by health institutions or local communities. A diversity of client groups is attending gardening projects. Horticultural therapy is supported by institutions like the Society for Horticultural Therapy and Thrive in the UK and the association for Horticulture and Therapy in Germany. In Sweden some healing gardens are linked with universities. In the other European countries gardening as therapy has no recognized status.

Animal assisted therapy, education and activities

The use of farm animals for therapeutic purposes is not widely accepted and implemented. Riding therapy or equine assisted therapy (EAT) is the best known form. EAT is recognized as a useful and meaningful therapy for children, youngsters and adults with mental or physical disabilities, learning and behavioural problems or psychiatric disorders. In Finland riding therapy has a recognized status. In Germany, Switzerland and Austria, EAT is divided into three different forms. Hippotherapy is physiotherapy from a medical perspective. “Behindertenreiten” is riding for the disabled as a sport activity. “Heilpedagogisches Reiten” has a psychological and pedagogic background.

Future of farming for health

The general opinion is that farming for health is a promising development as it links up with various developments in society; the increasing demand of inclusion and rehabilitation of clients with mental and psychiatric problems, the demand for multifunctional forms of landuse, additional sources of income for farmers and rural areas and the reconnection of rural and urban areas and agriculture and society. It is expected that the number of green care farms will increase in the coming years and that green care, HT and AA will get more interaction.

References

Education for sustainable development
- an investment in the future
Implementation strategies in schools

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The UN decade for Education for sustainable development (2005-2014) is of great significance for schools. Highly specialised projects are being developed in line with the programme.

A sustainable development is "one which corresponds to the requirements of the current generation without endangering the ability of future generations to satisfy their own requirements and to choose their lifestyle", as defined by the World Commission for the Environment and Development under the leadership of the former Norwegian Prime Minister Gro Harlem Brundtland in 1987. Social justice, ecological compatibility and economical efficiency are equally-ranking objectives of the concept ("Sustainability Triangle").

A garden is designed according to the principle of sustainability: other than the current crop, the next crop rotation is always in view. Long before the classroom, it was already the most important place of learning.

A school garden offers a wealth of impressions and possibilities. That is why a school garden must be just as much of a given as a chemistry or music room; a "green classroom" is a central place of learning and experience.

In the garden, people discover themselves as part of nature. Only those who perceive the great variety of types, their beauty, but also the mutual dependence of living beings on one another, are ready to appreciate and protect this variety. The school garden can make an important contribution to responsible conduct with the natural world and the teaching of values.

In the garden, children learn to wait patiently, to accept that development needs time, that not everything is possible immediately, and that not everything can be switched on and off by the click of a mouse. The garden is an important corrective to modern technologies, it "slows down", cares for the oases of calm and concentration.

The school garden teaches children that healthy food such as vegetables, salads, fruit etc. need time and that their production is connected with work; but also, that effort pays off and that the products can be prepared in the school kitchen or bought at the weekly market.

By working in the garden, other abilities and competences than those in the classroom are assimilated. The school garden is a place of interdisciplinary learning and different competences can be advanced.

Schools are facing new challenges. In classrooms, children from many different countries meet; language skills vary and many cultural traditions must be dealt with. By working in the garden, language plays a subordinate role and the garden can provide an impulse to make contact with different cultures regarding vegetables or fruit and their production.

Dr. Inge Schenk, 18 February 2007

Dr. Inge Schenk, General Secretary of the Deutschen Gartenbau-Gesellschaft 1822 e.V. (DGG, German Gardening Society). Studies of social pedagogy and the Educational Sciences; Promotion of "nature and environment education". Educator at the Nature Protection Centre of Hessen, then leader of an educational establishment in Darmstadt focussing on cross-generational learning, then Managing Director (until 2005) and General Secretary of the Deutschen Gartenbau-Gesellschaft 1822 e.V. (DGG). Further development of the focus of "Paths to learning about nature". Foundation in 2002 and since that time, Chairman of the Federal Syndicate of School Gardens (BAGS).
Where Hope Grows: Gardening & Life Challenges

Unruh, Anita; Hutchinson, Susan

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Overview
Leisure activity affords people expected and unexpected opportunities to think about and experience their own spirituality. Leisure frequently brings deep enjoyment and with it the opportunity to separate oneself from daily life stresses and becoming reflective about what really matters. Separation from everyday life, and the peace and receptivity possible through leisure enables people to give fuller attention to celebrating and affirming life. The overarching theme of this research was finding hope through life challenges through the experience of gardening. Gardening was frequently pursued by these research participants as a restorative leisure activity for the emotional, physical, psychological, social, and spiritual benefits that were associated with it. Finding a means to be hopeful is interwoven with all of these benefits but is also deeply rooted in what we sometimes think of as spirituality

What is spirituality?
Spirituality is an evolving, lifelong process of working out a conceptual framework of purpose and meaning in life that contributes to one’s sense of identity. The process is often introspective, requiring time for reflection and contemplation. It may be communal. It is frequently triggered or initiated by significant health or life crises. In health literature, spirituality is often defined as transcendence, connectedness, meaning and purpose in life, or sometimes as integrating aspects of the self, or as a search for the sacred.

Spirituality and Leisure
Life crises may interrupt daily life in profound ways. Spiritual expression in leisure often occurs through participation with nature-based leisure such as gardening though music, art, writing and other activities may provide similar contemplative opportunities. Gardening may be particularly conducive to spiritual experience because it involves interaction and nurturance of living things. The purpose of the analysis in this paper was to examine the ways in which gardening was associated with spirituality in a sample of adults who had participated in a prospective, qualitative study examining the meaning of gardens and gardening in daily life.

Research Design
The research design used a phenomenological approach. The gardeners were interviewed once in each season over a 1 year period. The participants were recruited through various community-based methods. Forty-two gardeners (32 - 80 years) participated. 18 gardeners were living with cancer, 9 of whom had metastatic disease; 3 participants died either before completing the study or shortly thereafter. The majority of the non-cancer group of participants were healthy but three individuals had progressive diseases. A 4th individual was legally blind. 5 participants were grieving or remembering the loss of a loved one.

Data Collection & Analysis
Participants were interviewed in their homes. All interviews were recorded and transcribed. Interviews included a walk in the garden; favourite parts of the garden were photographed. The interviews were guided by six open-ended questions. Participants also completed the Perceived Restorativeness Scale (Hartig et al., 1996).

Data analysis was based on constant comparative analysis to construct emergent sets of themes from the interview transcripts. A preliminary thematic framework was developed by the interviewer as the interviews progressed and revised in response to new information generated by additional interviews.
Each participant (with the exception of the three participants who had died) was sent a summary of the main themes in their interviews for confirmation.

Findings
Spirituality was one of the 12 primary themes in this study. It had 5 components: 1) Gardening as connectedness (connectedness with nature, the life cycle, and the life force; connectedness with the future and leaving something behind; connectedness with significant people, 2) Gardening as an expression of inner being; 3) the Garden as a spiritual place, and gardening as spiritual activity: 4) Gardening as Spiritual Journey, and 5) Stewardship.

Summary
Meaning-focused coping involves the reappraisal of negative and threatening experiences as challenging. In research, the capacity to seek out positive events (such as leisure) and infuse neutral events with positive meaning, is associated with reappraisal of stressful situations as bearable and meaningful. Such positive events are often associated with nature. In this study, gardening, as a leisure activity enabled expression of the spiritual dimensions of meaning-focused coping because the garden is a living system that mirrors some of the very tensions within all life (birth, fragility, nutrients, balance, survival, death). While meaning-focused coping through leisure may enable reappraisal and sustain hope and optimism, it is sometimes difficult to access leisure resources if appraisals signify (or even, magnify) a sense of loss. Disengagement and receptivity seem to be central to cultivating the spiritual dimensions of gardening. While the nature, form and meaning of gardening varied from day-to-day, season-to-season, and in response to people’s life circumstances, gardening was so beneficial because the gardeners were often able to “match” the optimal form of their activity engagement with their life circumstances and needs at the moment.

References


People have long recognized the psychological benefits of nature. Over 150 years ago, Henry David Thoreau observed firsthand the intrinsic benefits of nature as being necessary for the health of the human spirit (1854). Notably, Florence Nightingale, a mastermind of sweeping health reforms in 19th century England, also observed the importance of nature, even a view from a window, in the natural “reparative process” for people who were confined by illness (1860/1969). Despite such profound insights, only recently, in a new era of theoretical development in cognitive and environmental sciences, has there been progress in understanding how nature specifically benefits psychological well being. In particular, Attention Restoration Theory (ART) as first proposed by Kaplan and Kaplan (1989) has shown value for explicating the role of natural environments for enhancing mental functioning. This presentation will address ART, linking mental demands of daily life, development of mental fatigue, and use of natural environments to restore effective cognitive functioning. The research findings in studies of women treated for breast cancer will demonstrate the practical application of ART.

Directed Attention Fatigue
Kaplan and Kaplan (1989) posit a specific mechanism underlying the pervasive problem of mental fatigue, namely, overuse of the cognitive capacity to focus and concentrate, or direct attention. When a person purposely focuses and concentrates or directs attention to perform the myriad tasks in daily life, brain inhibitory mechanisms act to block distractions in the environment. When carrying out purposeful activity in the presence of distraction such as noise, worry, or physical discomforts, a person must expend greater mental effort to block out the competing activity in order to maintain clear focus and effective functioning. The ability to direct attention is widely known to be limited because it is sustained by mental effort (James, 1892) and susceptible to fatigue (Kaplan & Kaplan, 1989). Thus, from this view, a more precise term for mental fatigue is directed attention fatigue. When such fatigue occurs, there is a measurable decline in the capacity to direct attention characterized by a syndrome of distractibility, irritability, impatience, and loss of effectiveness in activities requiring directed attention, such as clarity of thinking, following a train of thought, and taking deliberate action. If unrelieved, such decline in basic cognitive competencies can have dire personal, social, and economic costs. ART proposes that one feasible, cost-effective means for counteracting directed attention fatigue is through exposure to natural environments (Kaplan, 1995).

Natural Restorative Environments
Kaplan and Kaplan (1989) and Kaplan (2001) have analyzed how interaction with the natural environment could help rest and restore a fatigued capacity to direct attention. The essential concepts of an attention-restoring experience are 1) resting tired cognitive brain structures, and 2) avoiding the use of mental effort in the new environment. These following properties are hypothesized to be essential for an attention-restoring experience: 1) being away, 2) fascination or an effortless way of attending, 3) sufficient extent or scope, and 4) compatibility with a person’s inclinations or purposes. Nature has been shown to have all of the properties needed to rest and restore directed attention because it provides easy respite and natural fascinations in green things of all kinds (plants, gardens, parks), water in the environment, and wildlife; allows enough magnitude for a person to remain engaged; and offers a wide diversity to fit individual preferences. There is a cumulative body of laboratory and field research supporting the theoretical link between exposure to the natural environment and restoration of attention in healthy and vulnerable individuals (e.g., Berto, 2005; Hartig, Mang, & Evans, 1991; Kaplan, R., 2001; Kuo & Sullivan, 2001; Kuo & Taylor, 2004; Ottosson & Grahn, 2005; Tennessen & Cimprich, 1995).
Application of Attention Restoration Theory in Life-Threatening Illness

Facing a life-threatening diagnosis of cancer is a major life event that makes it difficult, if not impossible, to function in an attention-conserving manner. Typically, patients find it difficult to concentrate even when faced with such urgent matters as making difficult treatment decisions and learning to maintain self care. Clinical observations suggested that patients might experience serious problems of directed attention fatigue.

A series of studies in women newly diagnosed with breast cancer were conducted to examine the possible development of directed attention fatigue. Valid and reliable measures of directed attention were identified that were theoretically congruent and appropriate for an ill population. Findings documented for the first time a pattern of attentional deficits of varying severity during and following breast cancer treatment. These deficits were not related to the extent of surgery, pain medications, or depressed mood state, suggesting the likelihood of fatigue (Cimprich, 1992, 1993). Subsequent studies, including recent use of functional magnetic resonance imaging in women newly diagnosed with breast cancer, indicated that attention may be compromised prior to any treatment, supporting an early fatigue effect (Cimprich & Ronis, 2001a, Cimprich & Ronis, 2003, Cimprich, et al., 2005).

The efficacy of a natural restorative environment (NRE) intervention for counteracting directed attention fatigue was tested in two randomized clinical studies. In the initial study of 32 women, the experimental NRE group chose modest activities, such as walking in nature and gardening, to fulfill the contracted 20-30 minutes of activity three times a week following breast cancer surgery. The NRE group showed significantly improved attentional functioning over the three-month study interval (Cimprich, 1992, 1993). Subsequently, in a study of 157 women newly diagnosed with breast cancer, the randomized intervention, initiated before treatment, consisted of a home-based program of 120 minutes per week of exposure to preferred NRE. Sustained restorative benefits over the 10-month study interval were manifested as improved attentional functioning in response to simple activities ranging from walking or sitting in nature, gardening, to birdwatching (Cimprich & Ronis, 2001b, Cimprich & Ronis, 2003).

Taken together, these findings indicate that a theoretically-based NRE intervention could improve cognitive functioning under extremely demanding circumstances. Therapeutic application of this modest, low cost, non-pharmacological intervention in the clinical setting has enormous potential for improving quality of life in cancer survivors.

References
Green care in the framework of health promotion

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Green care emphasizes the therapeutic use of agricultural and horticultural environments. When the context of green care is widened from therapeutic use to health promotion, new connections between health and environment are detectable, which increases the potential of green care. When green care is considered as a setting of health, e.g. farm or park in the context of its physical, social and ecological surroundings, we have a wide array of means to affect health.

Health promotion

Health promotion is a process in which the aim is to empower individuals so that they are able to exert control over the determinants of their health (WHO, 1986). Health promotion concerns the promotion of healthy life-styles and changes in living environment which enhance health and make healthy choices easier. The goals of health promotion can be met by adjusting personal, social, economical, physical, and ecological factors which have an effect on health. The actions to promote health include the building of healthy public policy, creation of supportive environments, strengthening the community actions, developing personal skills, and reorienting health services (WHO, 1986).

The means to promote health are prevention, health education, and health protection. By prevention the risk of occurrence of diseases, disabilities and other unwanted states is decreased. The target of health education is the change of beliefs, attitudes, and behavior to the direction, which contributes health. Health protection aims to increase people’s possibilities to live in healthy environments and to support healthy lifestyles (Downie et al., 2000).

Relative model of health

Green care can be positively influential simultaneously at many levels including physiological, psychological, and social functioning. To gain the whole array of health benefits in green care context, definition of health should be based rather on subjective evaluations than on objective, biological measures.

In the relative model of health introduced by Downie et al. (2000) both ill-health and well-being are interconnected through physical, mental and social facets. Overall health is experienced as the sum of health states of all facets at the time. The perceived health state is a dynamic process which is affected by individual meanings. In the model, health can be improved either by enhancing positive health or by reducing negative health, or doing both.

The objective of the therapeutic use of green care is to reduce ill-health. Green care can consist of horticultural therapy, animal-assisted therapy and of other therapeutic activities, which are targeted to heal conditions related to ill-health. Stress and attention fatigue can be seen as incapacitating states of human body; so the recovery provided by green environments is therapeutic. Ill-health can be cured by therapy, whereas the risk of the occurrence of ill-health can be decreased by health-promotion.

Well-being has two dimensions in the model: true well-being and fitness. True well-being is related to the empowerment of individuals based on autonomy and feeling of well-being. Coping resources and possibilities to use capabilities contribute to autonomy: green care provides plenty of possibilities to have control over events and situations and offers opportunities for free choice. Fitness is related to an individual’s physical capacity to cope with the demands of environment. Green care can be used to increase the compatibility of the individual with environment by providing exercise and accessible, supportive surroundings.
In reducing negative health and in improving well-being, all means of health promotion, prevention, health education, and health protection, can be used in the context of green care.

**Outcome measures**
The improved health outcomes of green care are difficult to prove, especially when biological health concept is used. If green care is considered as health promotion, more means to evaluate its effectiveness are available. Effective health promotion leads to changes in the determinants of health which can be related both to individuals and to the structure of the society. In a report by the International Union for Health Promotion and Education (1999), the outcomes of health promotion are divided to personal and structural ones. In addition to direct changes in health status, outcomes can be changes in health behavior or in community participation or environmental and political changes.

According to the report, the end-point of outcomes is health and social outcomes. Health outcome measures include reduced mortality, morbidity, and disability (ill-health). Social outcomes are related to an individual, and measured by quality of life, functional independence, and equity (well-being). Health and social outcomes are achieved by affecting their determinants such as personal behaviors, environmental conditions, and health care services. Changes in personal behavior which represent healthy lifestyle could be measured by an amount of physical exercise or by changes in nutrition. Environmental measures in green care context may include the content of VOCs (volatile organic compounds) in the air, noise level, and an amount of social relationships. The effectiveness of health care service may be measured by provision of preventive services, e.g. number of care farms.

The determinants of health (personal behaviors, environmental conditions, and health care services) can be affected by modifying personal, social, and structural factors. Health promotion interventions are targeted to change these factors. Personal factors include health literacy which can be measured e.g. by health-related knowledge, by behavioral intentions or by personal skills. Social action measures include community participation, social norms, and public opinion. Healthy public policy can be measured by evaluating policy statements, legislation, regulation, resource allocation, and organizational practices.

An effective health promotion intervention may affect all three above mentioned levels at the same time; health and social outcomes, the determinants of health, and modifiable factors which change the determinants of health. The effectiveness of green care, when regarded as health promotion, could be therefore assessed by measuring changes in different levels i.e. in knowledge, in policy, or in organizational practices. Changes in lifestyle or in environmental conditions, and in the use of health services are also relevant indicators in addition to changes in health status.

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Green care farming in the context of multifunctional agriculture

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Definitions of multifunctional agriculture and the implications for the study of green care farming

In this paper we look at green care farming from the concept of multifunctional agriculture. Based on literature review (Van Huyluenbroeck et al, 2007) three main definitions of multifunctional agriculture can be distinguished. Each of them is useful to look at specific aspects of green care farming. The first definition mainly looks from the supply side and defines multifunctional agriculture as the co-production of commodities and non-commodities. In this concept joint production derived from available resources on the farm is central. Green care on farms can indeed be seen as a second product for which the farmer has to deploy part of his available labour to the supervision and guidance of the guests. This will probably lead to another output bundle as it may affect also the commodity production. From this point of view, we may analyse the problems of inclusion of green care farming in the farm management and in how the remuneration of the service compensates the deployment of (part) of his the farm resources.

The second view on multifunctionality is more demand oriented. In this conceptualisation the societal expectations toward farming are put central. Society has indeed more and more expectations with respect to agriculture (nature conservation, landscape care, social inclusion, …). From this point of view we can study what society expects with respect to social inclusion of disabled people or other disadvantaged groups and in how far agriculture is then indeed the best provider to take up this role. In other words we may study hereby the efficiency and effectiveness of green care farming as compared with other forms of social care.

The third view on multifunctionality is a more holistic view and sees multifunctional farming as a new paradigm for agriculture with a shift from modernistic to post-modernistic farming emphasizing the social embeddedness of farming. In this holistic approach we may analyse the tangible and non-tangible benefits of green care farming for the farm, the farming sector or the farming community.

A neo-institutional framework to analyse green care farming as multifunctional output of farming

In the second part of the presentation we will look to green care farming through neo-institutional lenses. Green care farming can be seen as a service to society and thus partly as a public good because those receiving the services may not always be able to pay for it. As with other multifunctional outputs of agriculture we need then to look how the non-commodity service may be provided and remunerated. Neo-institutional economics studies how transactions can be organised in the most efficient way. Key concept hereby is transaction costs and hybrid governance (Williamson, 2000 and 2004). So this theory allows us to study how green care farming can be efficiently organised, both in terms of remuneration as in terms of intermediate organisations (role of coordination centres) to decrease transaction costs (search, information, negotiation and control costs). This framework may be useful for comparison of different organisational models.

Although the paper will mainly remain theoretically, it will be illustrated with knowledge on and examples of green care farming in Flanders.
References
Reconfiguring farm resources and territorial capital as resource base for green care activities

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Health and care as focal points of multifunctional agriculture
This contribution analyses green care farming within the overall framework of the shift of European agriculture from productivist to multifunctional farming practices. For this it builds on conceptual approaches developed in the previous EU research projects IMPACT and MULTAGRI. From a wider multifunctional agriculture perspective health and care appear as important (potential) focal points of the changing relations between agriculture and wider society. On their turn these evolving societal demands form the basis for new strategies of farm households (Knicker et al. 2004), which respond to these by “broadening” their activity base with the provisioning of new on-farm activities (e.g. care services) or “deepening” their relationships with food supply chains by producing and marketing foods with distinctive quality attributes (e.g. healthy food).

Reconfiguring farm resources as basis for green care activities
The successful establishment of green care activities on farms requires fundamentally different ways in which resources are mobilised and valorised within the farm (Knicker and Renting 2000). While in productivist agriculture e.g. land is mainly valued in view of the productive characteristics of the soil and / or its rational and efficient parcelation, from the perspective of providing green care services rather its contribution to an attractive landscape and a suitable therapeutic environment is important. A similar change in the role of farm resources accounts for e.g. the role and function of farm buildings and farm animals, which in the context of green care no longer principally serve productive aims but rather should be suited to the needs of client groups of care activities.

Synergy effects at farm and territorial level
For understanding the dynamics of green care within overall multifunctional farm strategies, it is crucial not look at care farming as an isolated activity but take into account synergy effects with other activities at farm and territorial level (Renting et al forthcoming). Many care farms appear to combine green care with other activities, such as organic farming, direct marketing and landscape management, thereby enabling changes in farm resources and combining various income sources. Moreover, the required reconfiguration of resources can only partly be effectuated at the level of the individual farm. Often changes in the mobilisation of resources within care farming depend on external decision units, either being other farms or other actors within the territory. The successful development of green care activities there requires new forms of collective action and co-operation at the territorial level, not only to effectively establish relations between supply and demand but also to construct an appropriate territorial resource base for the development of green care farming.

This paper explores the reconfiguration of farm and territorial resources within care farming, by drawing upon wider literature on multifunctional farming and illustrating this with empirical examples from care farming in the Netherlands. The paper contends that the successful reconfiguration of territorial resources and the construction of synergies, a.o. by establishing new forms of new forms of collective action between farms and other rural actors, are crucial for the economic success of green care initiatives.

References
Evaluating the social impact of Green Care enterprises: The social budget

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The observation of the positive effects that agricultural activities show in the care and working rehabilitation of some disadvantaged members of society, leads to the facing of the problem of the organisational form of structures within which such activities must be carried out. The “social agricultural enterprise” has a relevant position among these, or rather a production unity which is capable of uniting the characterisation of enterprises with the social vocation of its activities. The enterprise component concerns the finding and organisation of the productive factors and their transformation into agricultural food which is to be sold. The social component, through the reception, assistance, rehabilitation, education and occupation of disadvantaged individuals, offers a service whose aim is to increase human dignity, improve the quality of life of the disabled people involved and, in general, of the community they belong to.

The integration between the productive and social function of agriculture poses a series of questions concerning different aspects (organisational, technical, assistance, sanitary and commercial) which must be managed in a way that creates the conditions for an efficient system from an economic and social point of view. In order to evaluate this efficiency it is possible to use instruments such as the classic economic balance sheet and the most recent instrument for evaluating the social connotation of enterprises, in other words, social budget.

These supports, in the case of social agricultural enterprise, must be well structured and integrated so that a picture is formed which allows the correct evaluation and interpretation of the results obtained from the green care activities.

These aspects are looked at in the study being presented, raising the main questions of a conceptual kind concerning the measuring of the economic and social results of green care activities carried out within the social agricultural enterprises. On the basis of the highlighted points, some changes are proposed for the economic and social structure and a suitable configuration of the social budget, highlighting some indispensable components.

The intrinsic evaluation difficulties of some aspects are also highlighted in the study, in particular those of a therapeutic-sanitary type, along with the need for a considerable commitment in the research and experimentation of this theme.
Concepts of green care in a social farm in relation to social policies in Northern Germany. History, present situation and future aspects.

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Introduction
I intend to describe the development of our farms in Schleswig-Holstein (North Germany) in their history, in their present situation and the supposed future aspects. This with a special focus on the social work in this farmcommunities. But of course also with regard to the economic sphere and social law.

History and background
After the second world war several individuals were convinced that there must be a fundamental change of life style to make sure that the past never can come back. That led for my parents and friends to the decision to turn to bio-dynamic farming, although there was no market for such products at all. It was the method they were convinced of. The traditional social bedding of farming was kept until the economic growth in Germany was so intensiv that labourer left the villages and farms and turned to the economic miracle. It is important to me that it was not only idealism but also very practical circumstances that led to the further described development. That generation had to deal with the very serious questions: what is the task of farming and how can it survive- although there was already a number of idealistic young people who became interested in farmcommunities because they didn’t agree with the development of society. That were the famous sixties. Although tragic, the following years gave a new social impuls of farming because of the need of people in difficulties. That came about because a number of dissidents became addict and there were no places next to hospitals where to go to. This and the coincidence that biologic food became interesting, changed the intension of farmlife completly.

Development of the farm
Our origan farm had two tasks: to produce a large spectrum of products and there were a lot of people who needed a therapeutic eniviremant which is in our understanding a place with an own culture. This was very much supported by the very early decision to turn the place into a charity. Imanent the idea of a farm as an organism was much more important. The ecological system had also social consequececes. People realised a very well arranged surounding although it was quite poor. And what they did was very obvious nesseary. This development was very much supported by the former generation. Now it came up to us youngster generation to take over and create a professional and social surrounding because the number of participants grew very fast. We had to make the experience that the number of members of a farmcommunity shouldn’t grow further than up to forty altogether. That means a third coworkers and two third people in need. The fact that from the end of the sixties in germany also adult mentally handycaped looked for places like ours for long term, developed a new feeling of a home but also asked for more differenciated qualifications of the coworkers.

For the farms (now there came more farms) it ment more continutiy and stability in both spheres : the social and the economic sph. It needed a number of years to come to an agreement with the government how to deal with such concepts where there is a" normal" farm with its imanent orientation and out of that with a therapeutic task. But because there were quite a lot of such places meanwhile they got accepted as an alternativ to sheltered work even with own contracts etc..

The fact that these mainly anthroposophical "life and working communities" are financially not as well equiped is a burden but also a chance. It enabled us to have more individual styling because most of the building gets done by own hands etc. I point it out because this circumstances led to multifarious activities which creates a different character of farms as one is used to. Next to farming there is
gardening, caring landscape, handcraft, backery, processing in general, households, marketing, administration, art, medical care, social work and of course life sharing. This manyfoldness is envidened by a developed network which enables us to practise better arrangements with the state and offer a greater variety and flexibility. We realise that this structure is quite compartible with the aims of social policies. Already integrated in social life as such the farm communites offer very individuell possesibilities, don’t have social work based on leading groups and offer individuell aims as well as sheltering communities.

**Future aspects**

Further development depends very much on the possibility how to qualify interested persons who intend to join this nessesarily very engaged task. The experience is very encouriging. Since eight years we develop and practise a qualification which is acknowledged in this part of the country with meanwhile 75 participants. The next step is to qualify this training in general because it requires individuell assistence in every sphare. It is no secret that the combination of farmwork and socialwork hides a lot of conflicts. On the other hand it is a longing for nearly all interested members to find a solution to this secret. That led us to accept the next challange, to offer another training for farmers in practise ,specially.
Pathways of change in social farming: how to build new policies.

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Social farming in EU
Social farming -or green care- is an emerging issue in many EU countries linked to an increasing attention devoted to different aspects of multifunctional agriculture as well as to the recent concerns for public health expenditures and efficacy of social services. Social farming is a recent phenomena differently rooted and developed in each EU context although some common features. Similarities regard mainly the use of agricultural processes for therapeutic as well as inclusive and educational activities, the relationships among different sectors – health, education, job creation and agriculture – a bottom–up approach that links together in a growing process farms, social sector, users, an step by step local and central institutions, the heterogeneity of the models adapted in each country, the strong commitment of the people involved in each initiative, the character of this social innovation locally embedded and characterised by reflexivity. Differences are related to the number of the experiences in each Country, to the level of recognition and institutionalisation, to some specialisation of the main national practices on specific targets as well as to different organizational models present at root level.

Social farming as a pathways of change: building new policies for social farming in EU
In each national context, and in all European Union, the debate around social farming is an ongoing process. Quite often the reflection about the use of agriculture for social purposes starts from local experiences, isolated from each other, but it moves quite soon towards a growing network able to link together different and new public and private actors. Some of the main points debated are related to benchmarking among experiences and their efficacy, the reflection regarding the future of social farming, the relationships with policies of different sector and the possibility to explore new and more devoted policies. This slow process increases the awareness of the people involved and, at the same time, it is able to reinforce and to improve evidences and relevance of social farming and to promote an institutionalisation of the new practices. From this point of view social farming is comparable to a novelty able to growth in a strategic niche. The niches are managed at local level in between a different regime (the institutional welfare system). The establishment of new practices reinforce the evidences about the use of agriculture for social purposes and attract new subjects. As a consequence it became more easy to negotiate and to influence public institutions and to promote changes in the previous regime. Due to the grass root level of the experiences and to the incremental nature of this process, also policies devoted to social farming have to be carefully designed in order to promote and to reinforce this pathways of change and increase the relevance of policy networks. Policy networks have different functions able to filter, amplify, invest/provide, convene, build communities and facilitate the activities related to their main objective. Perhaps this networking process is an on going activity in Europe due to different initiatives that are cooping together (CoP, Cost, SoFar). At the same time, the claim for policies is still not well oriented and sometimes regards the formal recognition of social farming as a practice. The policy process seems to be more complex and organised in different circular steps: the local organisation of practices; the organisation of policy networks; the placement of the topic in a broader political arena, the negotiation of specific measures and instruments able to promote innovation in social farming and, at the same time, to spread and to transfer new practices among actors from different sectors in a process of slow but progressive institutionalisation capable to promote a change in the previous organisational regime.

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The diversity of care farms and their multifunctionality – contributions and perspectives for nature and landscape development

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Multifunctional aspects of social farming
Several surveys on the performance of farms with regard to nature conservation show that the main factors preventing them achieving more of it are shortages of human resources and time, together with insufficient funding. Today cultural landscape arises no longer as a by-product of farming, not even in the organic sector, but only when people work actively in shaping and developing it. This calls for lots of helping hands – an obvious contrast to increasing tendencies to specialisation and rationalisation in agriculture. Is 'social farming' capable of uniting sustainable agriculture with the requirements of nature conservation?

As part of the EU-concerted action: the landscape and nature production capacity of organic/sustainable types of agriculture (1993-1997; van Mansvelt & Stobbelaar 1997), an impressive farm on the Scottish-English border was visited in which the disabled were engaged in care and development of the landscape and had established numerous hedges and wetland biotopes. In Germany, a study for the Federal Agency for Nature Conservation entitled “practical approaches and nature conservation potentials of organic farms in developing cultural landscape” (van Elsen et al. 2003), investigated sixteen selected farms whose staff had the explicit aim of developing their landscape. Farms that in addition pursued social aims were in the majority.

More landscape work through more helping hands
An example of the synergy between social agriculture and development of the natural surroundings is provided by Surcenord Farm, an organic grassland farm in the Vosges (France) which keeps cattle and forms part of a remedial educational institution with several residential homes and workshops (Köppl & van Elsen 2005). Fifteen young people with learning disabilities aged between 15 and 27 receive instruction and therapy, work on the farm and undertake domestic duties. The two farmers place the land and the farm facilities at the disposal of the educators and carers. Some seven or eight of the young people at a time, always accompanied by educators, are involved in the farm work which mainly comprises work in the cattle sheds, harvesting fodder, woodland management and landscape care as well as the maintenance of fences and traditional irrigation systems.

Survey within the SoFar-project
Within the EU-SoFar-project (Social services in multifunctional farms) the FiBL is focusing on the components 'social farming – development of nature and the cultural landscape' and in particular addressing the questions of how to combine sustainable land use with social and 'healing' roles, and of what practical experience is available on the successful interaction of the development of nature and landscape with 'social' farming.

From a survey of example enterprises that was carried out it was found that in Germany, where they are largely organised as 'workshops for the disabled' (WfbM), scope for landscape work has often yet to be achieved. The carer's involvement in agricultural production limits what they can undertake outside the daily routine. Planting, managing and harvesting woodland; processing its products; sawing firewood and gathering foliage fodder; building and looking after nesting sites for birds and insects; mowing meadows; maintaining ponds and watercourses are examples of opportunities for work in which carers may become involved depending on their capacities. Landscape management services could conceivably be offered to other agricultural enterprises which because of time and
manpower are unable adequately to look after their cultural landscape. An as yet unsolved problem is, of course, how to reward such services.

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Monitoring patient progress at the healthcare farm ‘De Hoge Born’: preliminary results from the first phase

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In the last year we have developed a monitoring system which is able to monitor individual patient progress at the healthcare farm ‘de Hoge Born’ in Wageningen with regard to: (1) symptoms, (2) quality of life, (3) health and disease related direct and indirect costs, (4) patient treatment satisfaction, and the need for support (only for mentally disabled patients). The monitoring system includes questionnaires and 24 hours Heart Rate Variability measurements. It uses several case-study methodologies and statistical tools to analyze the results. Patients will be monitored for one year during their treatment at the Hoge Born up till 6 months after leaving the healthcare farm. In the next 1,5 year we will scientifically validate the monitoring system and start with exploring the possibilities of offering feedback from the information produced by the monitoring system to the healthcare workers in order to improve treatment.

In this presentation we will present the preliminary results of the monitoring process and demonstrate the experiences with its use in practice.

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Selecting Approaches and Methods for Researching Green Care

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Introduction
There is a recognised need for more rigorous research in the field of nature-based therapies or green care. There have been many qualitative studies in the area but there is little in the way of quantitative data and few controlled studies (see Sempik et al., 2003, 2005). Whilst the strengths of approaches such as randomised controlled trials (RCTs) are recognised and accepted for ‘mainstream’ biomedical therapies there is still debate about their appropriateness and feasibility for interventions under the umbrella of green care. There have been some RCTs in this area and other studies are planned but the area is still seen as problematic.

A Feasibility Study of the Use of an RCT Approach
We have carried out a feasibility study of using an RCT method to investigate the benefits of social and therapeutic horticulture (STH) for people with mental health problems and to establish the parameters for such a study were it to be feasible. However, the findings from this study are applicable to other areas of green care. We have consulted with practitioners and researchers in the field of mental health and clinical trials and have conducted a pilot study of specific outcome measures. The outcome measures used were the Clinical Outcomes in Routine Evaluation (CORE); WHOQOL – BREF; the Hospital Anxiety and Depression Scale (HADS); the General self-efficacy scale; and a form for collecting information on the ‘Use of Substances and Services’ i.e. hospital and GP services, interactions with the criminal justice system and the use alcohol and substance misuse. A sample of 29 existing clients of four garden projects took part in the study; they had a variety of diagnoses which included depression, bipolar disorder and schizophrenia. Their mean duration of attendance at a garden project was 3.4 years. A control group of 24 subjects (employees of a different university) with no reported history of mental ill health was recruited to the study.

Results
The outcome measures were well received by all participants who considered that the questions addressed appropriate and important aspects of their health. There were very few missing values in the data. The sample of clients from garden projects had significantly poorer mental health and well-being scores than those in the control group, or than published normative values, for all of the outcome measures (with the exception of use of alcohol and use of substances). However, there was a general perception among those clients that attendance at a garden project had benefited their health or had prevented it from deteriorating further. The following quotation from one of the clients illustrates their reaction when one of the projects closed for a short time:

“And without it I would be a lot worse off. When this closed down in July, and none of us we’re sure it would open again – it was devastating. Not just for myself, I can speak for all of the other volunteers. It had a massive impact. Believe you me”.

Examination of the differences in outcome measure scores, between the garden group and published clinical samples, suggests that the response to STH i.e. the effect size is likely to be small. We estimate that this may be around 0.5 Standard Deviations in the case of General Self Efficacy (GSE) and possibly less for the other outcome measures. Indeed, Berget (2006) observed a statistically significant change of around 0.5 SD in GSE score six months following a period of animal-assisted therapy. It is therefore important that studies are designed that have appropriate statistical power to
detect relatively small changes. Our power calculations suggest that a sample of 50 participants would be required for each of an intervention and control group for a study of 80% power and an alpha value of 0.05 for the effect size given above. We also conducted a survey of garden projects to ascertain whether there is sufficient interest in participating in a trial of STH to assemble study groups of this size. Our results suggest that this is achievable. We have also explored and discussed the importance of ‘clinically significant changes’ in those outcome measures and their relevance to STH as an intervention.

Examination of activities for use as ‘controls’ suggests that it may be preferable to use a ‘treatment as usual’ approach with a waiting list (i.e. all participants to the study eventually join an STH project) rather than an ‘active’ control. Many different activities have been offered to people with mental health problems in the hope that they might be of therapeutic benefit, however, there is no data regarding their effectiveness. The use of such undefined controls is likely to lead to difficulties in interpreting results.

We have explored the issues surrounding randomisation of participants for a UK study. We conclude that, because projects receive referrals from many different organisations and agencies which would need to be involved in the process of randomisation, this would be difficult. However, randomisation (into intervention and waiting list groups) at the point of entry into a garden project would be possible although this would include only those participants referred to a project. Issues regarding selection bias with such an approach were explored.

Finally, we present suggestions and parameters for the design of a study of STH.

Acknowledgements
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References
Animal-assisted therapy: effects on persons with psychiatric disorders working with farm animals

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Aim
Although Animal-Assisted Therapy (AAT) for humans with mental disorders has been well documented with pets, there is almost a complete lack of controlled studies of farm animals as therapeutic agents for psychiatric patients. The aim of this research project was to examine effects on self-efficacy, coping ability, quality of life, anxiety and depression of an intervention with farm animals among adult psychiatric patients (Berget 2006).

Methods
The project was designed as a randomized controlled trial (RCT) with a three-month intervention with farm animals and follow-up registrations six months after the end of the intervention. The patients worked with dairy cattle (mainly) twice a week for three hours. The patients’ scores were obtained before the intervention, in the end of the intervention, and six months after the end of the intervention. By measuring the same parameters of mental health six months after the end of the intervention, we sought to examine if the effects were permanent for a longer period for the treatment group (AAT group, n=60) compared with the controls (n=30), and if there were signs of different treatment effects in the different diagnostic groups. The treatment group received standard therapy (individual, group therapy or other kinds of therapy) and stable medical treatment in addition to the intervention, while the control group got treatment as usual. The health outcome measures were based on validated standardized instruments (Beck Depression Inventory; BDI, Spielberger State Anxiety Inventory; STAI, Generalized Self-Efficacy; GSE, Coping Strategies Scale, Quality of Life Scale; QOLS-N). We also analysed to what extent the patient’s self-reported outcome measures were in accordance with answers to more specific questions related to the intervention. We examined by video recording what kind of behaviours that were shown by the patients in their work with the animals, and the working ability during the intervention.

Subjects
Among the 90 included patients there were 59 woman and 31 men, with a mean age of 35 years (range 18-58 years). There were both inpatients (15.5 %) and outpatients (84.5 %) connected to a psychiatric department or to the municipal psychiatric health care services. More than 50 % of the patients had been ill for more than five years, and as much as 83 % received daily medication. We wanted to recruit patients with a variety of psychiatric disorders, partly in order to get a high enough number of subjects, and partly to examine if AAT with farm animals would be a suitable intervention for broad groups of psychiatric patients. The diagnoses were made prior to randomisation by the treating psychiatrists using the ICD-10 criteria. No minimal levels of symptoms were required. Among the included patients, the main diagnoses were 34 (37.7 %) schizophrenia and schizotypal disorders, 22 (24.4 %) with affective disorders, 10 patients (11.1 %) with anxiety and stress-related disorders, and 22 (24.4 %) patients with disorders of adult personality and behaviour. There was also one patient with eating disorders, and one patient with behavioural disorders due to psychoactive substance use (intoxication under control).

Results
There were 41 completers (68 %; 31 woman and 10 men) in the treatment group (AAT-group) and 28 (93 %; 17 woman and 11 men) in the control group. The patients showed significantly increased intensity (p<0.0001) and exactness (p< 0.0001) of the work with the animals by the end of the
intervention compared to during the first half (Berget et al. 2007). The effects of intensity and exactness were manifested among patients with schizophrenia and personality disorders. For the total group, no correlation was found between the behavioural parameters and effect scores of psychiatric instruments. However, among patients with affective disorders, increased intensity of work (late score minus early score) correlated significantly with increased generalized self-efficacy ($r_s=0.82$, $p=0.01$), and decreased anxiety ($r_s=-0.7$, $p=0.05$). The patient group as a whole spent on average most time in physical contact with the animals, feeding, cleaning, or milking cows.

There were no effects of treatment during the intervention, but six months after the end of the intervention anxiety was significantly lower than baseline in the AAT-group compared with the controls ($F= 5.17$, $p= 0.03$). Similarly, self-efficacy was higher six months after the end of the intervention than baseline ($F= 4.20$, $p= 0.05$) and than the end of the intervention ($F= 5.6$, $p= 0.02$) for the AAT-group compared with the controls. There were no statistically significant effects of treatment on anxiety or depression for any diagnostic categories, but the patients with affective disorders showed significant increase in self-efficacy and quality of life during the follow-up registration. There was also significance in self-efficacy between treatment and control during the intervention, reflecting increased self-efficacy among the affective patients in the treatment group. There was significant positive correlation between the difference scores in GSE and in the Coping Strategies Scale for the treatment group during all the periods. Specific questions related to the intervention (treatment group only) also showed that patients with the largest increase in GSE reported the largest increase in coping ability in daily life, and that the patients with the largest increase in coping strategy reported the largest improvement in mood and that they favoured physical contact with the animals.

**Discussion and conclusion**

We did not find any effects of treatment during the intervention for any of the standardized instruments, and the comparison with the control group revealed no effect. However, we found positive effects of treatment at follow-up for several of the psychiatric instruments. One potential explanation might be that effects of the ordinary psychiatric treatment being improved by the AAT intervention, i.e. the AAT serving as a catalyst for positive development in the patient. Another explanation is that the patients may have learned new tasks during the intervention and afterwards felt more self-confident. Decreased anxiety at follow-up might be due to pleasurable experiences in the interaction with the animals that made interaction with other people less frightening, but the effects appearing only some time after the intervention. Finally, the patients have had their symptoms for a long time, which makes it more unlikely to achieve a rapid and great improvement. Even if the health outcome effects were rather moderate, it is encouraging that some were found, based on the limited sample size and the rather unspecific intervention.

It is a question whether the length of the intervention was sufficient, or the frequency of farm visits too low, to get significant differences between the groups. The delayed effect in GSE, Coping Strategy Scale, and STAI could indicate this, but these very effects also indicate that the intervention did have effects additional to the usual treatment.

The strengths of the project were the wholeness of the validated assessments and the moderate drop-out rate. The results suggest that AAT with farm animals may be a useful addition to traditional psychiatric treatment, perhaps particularly for patients with affective disorders.

**References**


Mental fatigue – a perspective on stress

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Introduction

Background
The World Health Organization (WHO) predicts stress to become one of the largest health problems in the years ahead (WHO 2005). In relation to the complex of problems about stress we find it relevant to focus on the issue of mental fatigue and the physical work environment where people spend the majority of their waking hours to explore the possibilities for health promotion by creating restorative environments.

Mental fatigue
Modern human beings are surrounded by an overload of information that they must sort and assess the importance of. Intense or prolonged demands for directed attention can lead to attentional fatigue, a psychophysiological state manifested as heightened autonomic arousal and as a decreased capacity to inhibit competing stimuli along with reduced effectiveness in work and daily life (Kaplan & Kaplan 1989; Hartig 1996).

Theoretical framework
We address the issue about mental fatigue and restoration in the work environment in an integrative framework inspired by environmental psychology, cognitive psychology and occupational medicine. Research in the field of environmental psychology indicates that vegetation and nature accelerate human beings’ recovery from stress and mental fatigue and hereby promote human health (Kaplan & Kaplan 1989; Ulrich 1983, 1984; Hartig et al. 1996; Parson 1991). Among the theories that form the basis of our work are the Attention Restoration Theory (1989) and the Psycho-Evolutionary Theory (1983) (Kaplan & Kaplan 1989; Ulrich 1983), together with an interpretation of the theories as supplementary.

In addition, we are inspired by the stress theorists Karasek and Theorell (1990) and Netterstrøm (2007) and the understanding that stress can be induced by an imbalance between demands and the individual’s resources to meet those demands (Karasek & Theorell 1990; Netterstrom 2007). On this background we understand mental fatigue as a consequence of cognitive demands which exceed the mental capacity. Mental fatigue is hereby interrelated with the concept of stress.

The purpose of this study is to explore mental fatigue and whether the restorative effects of nature can be extended to plants in indoor work environments and create micro-restorative experiences (Kaplan 1993).

Methods

Basis for our design
We made a literature-review on studies concerning the relation between nature and stress and further on nature and work environments (Larsen et al.1998; Shibata & Suzuki 2002; Shibata & Suzuki 2004; Fjeld et al.1998; Chang & Chen 2005) with focus on problems concerning conceptual and theoretical frameworks and research methods. In the view of this work we have designed a randomised controlled trial making an attempt to take some of the problems into account.
**Subjects**

75 female students (18-40 years) from further and higher educations in Copenhagen were recruited for participation in the research.

**Measurements**

Three different measurements are chosen to strengthen and substantiate the results in our experiment:

1. **Subjective parameters:** 5 point Likert scale questionnaires to document emotions of mental fatigue and evaluate the rooms and the aesthetic experience of the decoration.
2. **Performance parameters:** three attentional tests: Contingency Naming Test (Taylor 1987), Reasoning computer-test (Olsen & Shibuya 2006) and d2-test (Brickenkamp 1993).
3. **Physiological parameters:** Standardized blood pressure and pulse measured with an electronic blood pressure wrist-cuff.

**Hypotheses**

1. Mental fatigue can develop due to intense attentional work of short duration (35 minutes).
2. Mental fatigue is measurable by subjective -, performance - and physiological parameters.
3. Subjects in the work environment decorated with plants will become less mentally fatigued by the cognitive workload than the participants in the environments with abstract pictures or no decoration.
4. Restoration from mental fatigue, in a 5 minutes break, is more efficient in the work environment decorated with plants than in the other two work environments.
5. The extent of restoration from mental fatigue will correlate significantly with a positive evaluation of the environment.

**Design**

Pre-post-test. 75 female students were randomly assigned to one of 3 groups. The study subjects did the test one at a time and were placed in one of three environments; a room with plants, a room with abstract pictures (control) and a room without decoration (control) respectively. The tests were followed by a 5 minutes break to induce restoration. Before the test and before and after the break questionnaires were completed. The d2 test was then repeated. Standardized blood pressure and pulse rate was taken before and after each test. The study subjects and assistants were the same sex. The decoration of the rooms were done by danish experts and suppliers of plants and art for offices (Deichmann Planter and Art&Frame).

The study took place from the 21.st to the 25.th of May 2007.

(Results in press)

**References**


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Effects of green-care farms on quality of life of people with a psychiatric and/or addiction history. Future research challenges on green care farming

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Introduction
In a pilot-study we discussed the importance of green-care farms with 42 people with a psychiatric and/or drug-addict background in different focus-group meetings. Participants indicated that they feel better after visiting the green-care farm. The farm offers them a safe and welcome atmosphere, and outdoor work that is at the same time both pleasant and useful. The combination of these aspects makes a green-care farm different from other existing day activity projects and therefore gives participants more choice in their day activity program. The participants were asked what the green-care farm has to offer. In short, participants indicated that they acquire more physical and mental strength, the work they do is useful, which gives them more self-confidence and self-respect. After analysing the focus-group discussions the following results are found:

<table>
<thead>
<tr>
<th>Physical</th>
<th>Mental</th>
<th>Social</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical strength</td>
<td>Increased self-esteem</td>
<td>Re-socialization</td>
</tr>
<tr>
<td>Increased appetite</td>
<td>Persistence</td>
<td>Personal responsibility</td>
</tr>
<tr>
<td>Increased use of senses</td>
<td>Involvement and responsibility</td>
<td>Increased social contacts</td>
</tr>
<tr>
<td>Accomplishing more work</td>
<td>Relaxation</td>
<td>Increased self-respect</td>
</tr>
<tr>
<td>Becoming tired/ sleep better</td>
<td>Increased awareness</td>
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</tbody>
</table>

Table: The positive effects of green-care farming on the physical, mental and social well-being of participants.

The pilot-study resulted in an effect study in which we follow the respondents by doing surveys for 1.5 years. Participants complete a questionnaire before they go to a day activity project, after 6 months (t=1), one year (t=2) and 1.5 years (t=3). We assume that the quality of life and the mental and social functioning of participants will improve by working on a green-care farm. The study considers an experimental group (participants working on a green-care farm), and a control group (people who work at other day activity projects). The survey is comprised of several established questionnaires. The choice for these questionnaires were based on the outcome of the pilot-study. For instance, because participants mentioned an increase in social contacts, a questionnaire on social functioning was integrated.

Future research challenges
A farm environment in general can have three positive basic functions, a cure, care and preventive function. It is therefore necessary that research covers those three functions. We can look for instance at the cure function by studying the effects of green care on psychiatric patients. Research on the care function could be focused on contribution of farm environment to rehabilitation and re-socialization of clients. In case of the preventive function research on green care may focus on the healthy growing-up of children.

It is crucial to develop a common theoretical framework on theories, mechanisms and paradigms used in both green care as well as in the health care sector. Input of different disciplines is needed. Because lots of activities take place in green environments it is important to define the umbrella term of green care, which kinds of activities and therapies take place on farms or in green environments? In addition it is not only relevant to know about the effects of green care activities on clients but also to search for the elements of farms and green environment, causing those effects.
How to be a care-farmer for € 73: a shareholder survey of the Fordhall Community Land Initiative (UK)

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Background and objectives
In 2003, the young tenants of Fordhall Farm, an established organic farm in the English Midlands, were threatened with eviction by the landowners, unless they could raise the purchase price of £800,000 – (€ 1.17 million). With community support and expert help, the Fordhall Community Land Initiative (FCLI) (an “Industrial and Provident Society” under UK law) was established in 2005, in which shares were offered to the general public at £50 (€ 73). Approximately 8000 people responded with share purchases, donations and interest-free loans and the farm was duly purchased in 2006; it now has “one farmer and 8000 landlords”? Details are at www.fordhallfarm.com

The 8000 owners of Fordhall cared enough about it to donate money; but why? They are not only geographically local to the farm but come from 24 countries. What motivated them to offer support? And how have they benefited from their contribution? Is the project a new model whereby anyone, for little investment, can belong to a green-care initiative? This paper reports the preliminary results of the author’s survey of Fordhall Farm shareholders which aimed to uncover people’s motivation for responding to the appeal – for caring enough about the farm to help to buy it - and what they subsequently have gained from being part-owners.

Method
Face-to-face interviews were conducted with key early supporters of Fordhall and other stakeholders to uncover their personal reasons for supporting the Initiative and what questions they felt would be helpful in a wider survey. A web-based questionnaire was then developed, pre-triailled and launched in early March, 2007. People without internet access could request a paper version. The questionnaire is in two parts with forced-choice, and open-ended questions. It asks why respondents became interested in the Fordhall appeal, what they have gained from it, how they feel about its wider purpose (for example, in stimulating political change in farming policies and land ownership), and what their future involvement with Fordhall might be. Information about the survey was placed in the Spring 2007 edition of the Friends of Fordhall Newsletter, which is sent by post to all shareholders and “Friends” (subscribers) (n=8000), which is, therefore, the sampling pool for the web survey.

Results
The pilot interviews revealed that the “early supporters” were people for whom the Fordhall message was important. Interviewees described personal commitment to the principles of organic farming and growing, sustainability, and animal welfare issues in agriculture. They saw the Farm as deserving support because of its long history of organic farming (65 years), its threatened status, and the inspirational vision and energy of the FCLI. The web survey will expand these early findings, but at the time of writing this Abstract, the web questionnaire has been “live” for one day only.

Conclusions and Implications
European farming is under threat, and yet there is increasing public commitment to organic principles. Fewer people than ever live in traditional rural communities, and yet people seek health and lifestyle benefits from contact with nature. The Fordhall Project offers a radically new way forward, where ordinary people can re-connect with farming – by being part-owners in a community-owned enterprise committed to “green” principles. The current study will provide details of their ongoing involvement, and their attitudes to the Project may demonstrate new ways in which those who don’t own a farm can actively be “care-farmers”.

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Care farming in the UK – Recent research findings on i) the scope and range of Care Farms in the UK and ii) pilot study on the psychological health and well-being benefits of care farming in the UK.

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Findings of research suggest that therapeutic applications of green exercise could be effective and this is termed “green care”. There is a growing movement towards green care in many contexts, ranging from green exercise activities, social and therapeutic horticulture, animal assisted therapy, eco-therapy and care farming. Green care in agriculture or “care farming” is defined as the use of farms and agricultural landscapes as a base for promoting mental and physical health. Farming is used to provide mental and physical health benefits for a wide range of people. These may include those with defined medical or social needs (e.g. psychiatric patients, those suffering from mild to moderate depression, people with learning disabilities, people with a drug history, disaffected youth or elderly people) as well as those suffering from the effects of work-related stress or ill-health arising from obesity. Care farming is a partnership between farmers, health care providers and participants, and so combines the care of people with the care of the land. Care farming is part of a growing recognition that the land is multifunctional, providing a range of environmental and social goods and services. Green care on farms is thus part of a movement to reconnect people to the land, and to the food produced by domestic farming.

While the term “care farming” is well-recognised in Europe, in the UK, the concept is relatively new. There is an increasing amount of interest from many sectors including farmers, health care professionals and social care providers, the prison and probation services and there are a number of care farms already operating throughout the UK. However the numbers of care farms are thought to be small and the movement is very embryonic at present, with no national framework. The National Care Farming Initiative (UK) aims to promote and support the expansion of care farming throughout the UK and with funding from Natural England has commissioned the University of Essex to undertake research to establish the scale of care farming in the UK.

This research is really the first part of a process which we hope will lead to further and more comprehensive research in this area in the future. This first phase is split into 4 components:

i) a first overview of the range and number of current care farming initiatives currently operating in the UK

ii) a more detailed analysis of around five different types of care farm to provide further data on psychological health and well-being effects. This will give baseline information from which we hope to build a body of evidence to support the promotion and spread of care farming in the UK.

iii) advice on good practice for appraising care farming activities in the countryside, including an analysis of evaluation criteria and a commentary on examples of good practice in appraisal, monitoring and evaluation found in the published literature and from existing research in Europe.

iv) further research priorities for care farming in the UK.

Research is currently underway and is expected to be completed by May 2007.


2 See National Care farming Initiative (UK) website www.ncfi.org.uk
Animal assisted therapy, pedagogics and activities with farm animals

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Background
Since the year 2003 ÖKL built up six „pilot farms“ in four Austrian states who offer animal assisted therapy and/or pedagogics. Farmers are running the therapeutic sessions in team work with a therapist, teacher, social worker or other qualified professionals.
Participant farms are obliged to use well socialised and trained farm animals (cows, pigs, goats, sheep, etc.) and to assure animal friendly keeping systems. During the sessions a holistic approach involves all the farm environment and not only the farm animals. The program includes feeding, grooming, patting, games with the animals and goal-oriented interventions which correspond to the individual needs of the clients.
ÖKL did the counseling for these farms concerning animal training, modification of animal housing, individual concepts, session programs, marketing, etc.and goal-oriented interventions which correspond to the individual needs of the clients. Economic calculations based on the data of the six pilot farms present how the offer of animal assisted therapy and pedagogics can be economically profitable for the farms.

Therapeutic effects on clients
The sessions with the clients on the pilot farms have been documented and analysed. The client spectrum includes adults with disabilities, socially and emotionally disturbed children and elderly people with dementia. The results are three quantitative studies and 54 qualitative case studies. The most important effect of the farm animals can be described as a balancing element on clients who exhibit extreme behaviour. Another outcome is the development of essential abilities and transformation of destructive to constructive behaviour strategies in clients.
Farm animals have a calming effect on clients with aggression problems or hyperactivity. On the other hand the farm animals enhance social interaction, self-esteem and activity in clients with social insecure behaviour.
Farm animals contribute to improve the sensory perception of clients and increase sensorimotoric skills as well as social abilities. We want to state that regular weekly farm animal contact over a period of a few months is a major factor for these changes in clients.
The correlation between specific behavioural modes/expressions of different species of farm animals and their effect on different client groups have been evaluated. There would be a research need for further investigation of these correlations and the deduction of detailed therapy plans from these results.

Farm animal training
ÖKL gained a lot of hand on experience socialising and training farm animals based on positive reinforcement methods. We issued a socialising and training program for farm animals. Some basic learning principles established with pets can be partly applied on farm animals as well. In addition it is necessary to consider specific training strategies for specific farm animals -especially for ruminants- because the character and requirements of farm animals are different to companion animals and pets. Human - farm animal - interaction (body language, stress symptoms of the animals, behavioural parameters, signal control, etc.) and further development of socialising and training strategies for farm animals need to be established.
There is a strong need to investigate the effect of animal assisted interventions on the participating animals themselves (companion animals, pets, farm animals, etc.) to make sure that the animal assisted interventions consider animal welfare issues.

**Equal standards in Europe**

To establish professional quality management in the field of animal assisted therapy it is essential to have consistent standards and regulations throughout Europe concerning housing, training, assignment of the animals, venues and qualification of the professionals who are working with the clients or deliver the programmes. ÖKL is preparing an examination system for farm animals which lists the requirements the farm animals have to meet to be admitted to animal assisted interventions.

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Intensive rural programmes and the unmet need for personality disorder programmes

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Losing the plot

Early polism?
In the earliest recognisable programmes that we could recognise as therapeutic communities, at Geele in Flanders in the 13th century, ‘mentally distressed pilgrims’ came to a therapeutic village where structures and procedures were in place for taking care of these individuals in the context of others’ families and wider village life. This was a rural agricultural setting, and the main factor demonstrating mental health was to be able to work on the land with other villagers. As traditional psychiatric hospitals evolved, they did so with farms as an essential part of their structure for allowing them to be as self-sufficient as possible. This continued until the mid 19th century.

Losing heart
In the 1960s, the ‘anti-psychiatry’ movement’, with main figures of RD Laing, Thomas Szasz, Foucault and Basaglia, attracted many adherences in proposing the view that mental health practices were a dehumanising, and politically unacceptable way of human beings exerting power over others. Although the anti-psychiatry movement did not survive in its original from, the thinking informed many subsequent reforms such as ‘unlocking the doors’ in asylums and to a small extent in the development of therapeutic communities. R D Laing was perhaps the most eloquent proponent of the requirement that mental health needs to be considered in a deeper and more holistic way than was currently in practice. Modern critiques of psychiatry clearly illustrate how technological and scientific progress has been accompanied by a loss of social, psychological and interpersonal awareness. (Bracken and Thomas, 2002)

In short, many now see the practice of mental health as having become technical, sterile, mass produced, with excessive use of unnatural chemicals, isolated from its wider context, and shallow in terms of meaning and experience.

Health is not enough

Medicalisation
One of the consequences of this trend has been the increasing medicalisation of mental ill-health. A major part of this is diagnosis: once a diagnosis is made, a protocol can be applied with decision trees used to guide treatment that is thus reliable and replicable. In the UK this is strongly driven by government initiatives such as the National Institute for Clinical Excellence (NICE) and political pressure to ensure that all publicly funded treatment offers equitable access and is justified with clinical and cost effectiveness evidence.

Personality disorder
Although this strict evidence based medicine approach works well for conditions such as infections or chemotherapy treatment of cancers, it is not possible to apply to complex individual experiences as are seen in ‘personality disorder’. Personality disorder is as much a lifelong and maladaptive way of being as it is an ‘illness’; although the public image is of dangerous people who need locking up to prevent harm to others, in fact it is a common condition with which very many people suffer painful
and chaotic lives, very troublesome relationships and multiple psychosocial problems. These are not amenable to simple solutions using a medical model.

**The National Personality disorder Programme**

In 2002 the English Department of Health supported eleven new clinical projects to set up experimental services to offer help to people with these conditions, who had previously been excluded from services - often being considered untreatable. The Thames Valley initiative is the largest of these eleven projects, and covers the counties of Oxfordshire, Berkshire and Buckinghamshire – a population of 2.1 million. With a team of approximately 25 clinicians, services have been set up to deliver new ways of working with those who have these problems, with the intention of recovery - and not life-ling invalidity.

**Creative collaboration**

In the same way as medical procedures are unhelpful for people with this nature of problem, the environment and culture of hospitals is not ideal. A model on which the Thames Valley Initiative is based is that of a therapeutic community. Therapeutic communities are a deliberately designed psychosocial environment in which regular meetings and therapy groups are held, as well as a range of other practical and domestic tasks. In the early days of therapeutic communities, these tasks would often be agricultural or horticultural in nature: this rarely happens now.

The opportunity that is now arising is to combine the political and ecological importance of the green care movement with the intensity, rigour and professionalism of therapeutic programmes run by trained clinicians. The communities could benefit by having a base in more conducive environments, such as farms, and include farming activities as part of their programme. The farms would have the advantage of this being a way of using the farming resources in a socially beneficial way, and to have a certain amount of labour to help in the production of food. The production of food itself is also likely to have substantial psychological benefits for those members of the community involved in it.

The following paragraph was included in the initial Thames Valley Initiative proposal, the bid which was successful in being granted over £1m of new NHS funding, annually:

*One example of preliminary work in this area is the development of plans for a “creative community” which will build a safe environment for therapeutic activities and learning opportunities, drawing on ideas from traditional cultures, community values and the power of relationships. It will build on NHS work already undertaken in West Berkshire and function as a self-referral day unit for personal growth on an organic farm.*

**Community of Communities**

A quality network with set standards against which members can visit and review each other has now been in existence for five years, and a small number of its members could be considered as Care Farms. Any new endeavours or ventures of this nature would receive practical support and guidance through this process in setting up a high quality service that would be recognised by relevant statutory bodies and inspectorates.

**Impossible hurdles**

**Governments and bureaucracy**

Although part of the wish to set up Care Farm therapeutic communities is to escape anti-therapeutic and obstructive regulations and policies, it is acknowledged that many similar structures will be found in the agricultural sector. Some that may be particularly relevant include health and safety regulations, insurance requirements, and food hygiene. In hospital settings, suitable training and imaginative ways of adapting official policies to a more user friendly ethos are generally accomplished: it is likely that similar measures could be used in agricultural settings.
**Finance**
All sectors of healthcare are currently under intensive pressure to reduce costs to a minimum. Therapeutic communities have meant moving from a predominantly residential model to one where people needing this treatment would visit the unit every day or sometimes one or two days per week. Funding for personality disorder is currently only through health service channels, but the long term benefit of good treatment is felt in all areas of somebody’s life and subsequent less use of resources, (for example they will need less medical treatment, their children are less likely to need to be taken into statutory care, and hopefully they will get in less trouble with the Police) These ‘cost offset’ benefits have been well demonstrated over the last few years in therapeutic community programmes. Similar programmes of less therapeutic intensity and rigour often exist in the voluntary sector. However, this is an unstable source of funding in that grants seldom last for more than three years, and the knowledge base that is accumulated can soon be lost, and people mid treatment can thus be left bereft and dangerously disturbed. For these reasons amongst others, it is proposed that this project is either delivered either in the National Health Service or in close partnership with it.

**Clinical intensity**
Green Care programmes exist which deliver useful care and therapeutic interventions across a wide range of medians. Therapeutic communities for personality disorder are at an extreme end of the spectrum, in dealing with intensive therapeutic work with people who are extremely disturbed. A high level of disturbed behaviour, emotional expression and turbulent relationships are to be expected. For this, high standards of training are required of staff supervision and of professional expertise. Despite this, the authors believe that these programmes can be better delivered in agricultural settings than in a hospital ones.
Effects as Stimulation for Development of the Green Programme in CUDV Draga, Ig, Slovenija

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In this article I would like to present the development of the Green Programme in our institution, since its beginnings 15 years ago till today. I would especially like to concentrate on the positive effects of this programme on mentally disabled people.

Goals
For our population, children, youth and adults with disturbances in mental development and additional disturbances, we searched for new activities that would additionally encourage them to fulfill their potentials. In this activity we used the rural environment in which we are based and our own knowledge that we had up to that point. Since the initial feedbacks were encouraging, we set ourselves the goal of forming activities of the green programme in a way that our clients could perform at least half of the activities themselves or under the supervision of our staff. For this to work, we had to adjust the space, time, technology and methods of work so that they will suit the actual abilities and preferences of our clients. At the same time we had to take into consideration the number of staff and time available.

Methods
This was a longitudinal study in which we used methods that enable the evaluation of interactions between work tasks and their abilities, and step by step form the concepts of individual activities and technological phases like they are today.

Each activity was dismantled by each part of the working process, and then ranked them in four categories according to their difficulty and the ability a client must posses to complete a single phase of this activity (ranking from 1.category – simple tasks to 4.category – most demanding and dangerous tasks). We evaluated the way in which a task was completed by a client; emancipatedly, under the verbal supervision of our staff member, with the physical help from a staff member, or not completed. At the same time this evaluation is a part of the individual curriculum of every client.

Content
Some 15 years ago we started with the activities of agriculture, horticulture and landscaping. Since then up to this day, we can divide this era in 3 developmental phases; beginning phase of our enthusiastic starts, second phase – sobering and evaluation, third phase (continuing) – specialisation.

In the first phase most of the activities were held outdoors, where both our staff and clients were put to the test. It turned out that The Green Programme was set much too vastly, because the preparation and maintenance of the object of our programme took up too many work hours of our staff and at the same time, the abilities of our clients were unsufficient.

Though the quality and quantity of a harvest are important both from the economic and motivational point of view, but are not a sole purpose and goal of our programme. The activities were concentrated in the sping and autumn, but the time between proved to be problematic.

On the other hand we established that the work and contact with plants, animals and our dear earth, had a positive effect on a part of our population; hyperactive, agressive and autoagressive clients. For some this was the only field where they gathered positive experiences. Here they were able to show their abilities while their shortcumings were not a factor, which is a small part in the building of their selfimage.

For that reason we built in the second phase the programme like it is known today.
Results
Agriculture was abandoned due to its overcomplexity, but we are still working in the field of landscaping, because it has mostly activities of the first and second difficultness, which are the most appropriate for our clients. While we kept gardening mostly for its therapeutic reasons, although we still see some doubts today. The preparation of the gardens and fields through summer, is still proving to be a menace, in spite of all the modern technological processes of farming. We arranged for a new enclosed property, where the activities could go on in the most part of the year: the planting and cultivation of flowers, herbs and spices. We established some new activities that would fulfill the late autumn and winter time: cultivation of mushrooms, care for animals, storing of the harvest and the use of the harvest and the production of hand-made herbal paper.

Our observations have shown us that the realisation of our activities depends on these factors: educated staff, additional adaptations of time, work, place etc., continuos work and the available work-related possibilities.

Conclusion
The result of our longterm efforts is that The Green Programme is today a part of our educational programme, work and work activities in our center for children, youth and adults with moderate, severe and profound deficiencies in mental developement.

The experiences from the programme working with the clients with the most severe deficiencies in mental development, showed to be useful in the formation of our sensory garden, which is specially adapted and accessible to even the clients with beside mental have also motorical deficiencies.

References
Outlines of the project

Started at the end of 2006, the project ‘A Garden for Horticultural Therapy’, funded by Ufficio per le Politiche dell’Handicap of Provincia di Roma, is going to be accomplished in the end of June. Considering the original typology of the patients taken in exam (acute psychiatric patients), the limited period of admittance and the limited period of recruitment of patients discharged (approximately 6 months), the results are beyond all expectations. The project, divided into ten steps, has been completed in all its phases. The hydroponic culture, a technique used for the first time in an Italian psychiatric department, seems to be very appreciated by the patients who have been highly involved in an active working program. The working group, assisted by the hospital’s specialized team of operators, has been given a report form to evaluate each patient’s behaviour, participation, skills acquired, interaction with the group and eventual behavioural changes after each meeting. The results report that the attention and the enthusiasm of the patients have increased constantly step after step. The essential part of this project has always been concentrated on the recovery of the in-patients during the admittance period and after the discharge, in order to guarantee a continuity to their health assistance and rehabilitation, in team with the field services, also when they go back home. This way, the patients could achieve and maintain not only a good psychological and physical balance but also those abilities which will give them the possibility of a new social and working reintegration.

The horticultural meetings: experience and evaluation

The main aim of the project is that of creating an atmosphere of quietness, mutual acceptance and social support. By the horticultural therapy this support is not only given throughout words but also by the possibility to stay together involved in working activities that help the recovery of the patient’s mental status. The meetings took place in the hospital’s socializing green area (260sqmtrs) equipped with a wooden gazebo, seats, didactic garden and mediterranean vegetation. Operators, relatives and caregivers cooperated to stimulate a proper recovery of the patients’ psycho-physical balance and to encourage their social reintroduction. The first meeting was focused on the introduction to the hydroponic culture by means of films about techniques and materials employed. In the second meeting has been arranged for the patients a on-site simulation, explaining the techniques to be used and showing the materials to be handled. During the third meeting the patients met the garden: they were given the indications to use properly the tools and the materials at the presence of the operators. The forth meeting was highly "practical": the patients built themselves, guided by the operators, the hydroponic tank to locate the seeds they were going to plant. At the fifth stage the patients were invited to choose personally the seeds to plant and nurse. During this meeting also the most difficult patients started to participate and cooperate actively. In the sixth meeting the patients were ready to put the seeds in the water, by locating them in the tank and performing the following steps: create a proper board to let the seeds float on the water, measure the water temperature and PH, mineralize the water with the compounds needed to create a proper ambience for the plants. Waiting for the "birth" of the new plants, in this seventh stage the patients came back to their primary activity of gardening with bulbs and aromatic plants (rosemary, parsley, fresh onion and ravish). In the eighth meeting the patients checked the progress of their activity and reintegrate the compounds
of the water to strengthen the growth of the vegetables planted. During this stage the patients were invited to tell about their considerations and suggestions on the experience.

The last two meetings were dedicated to the evaluation of the data collected during the last 5 months and to a final confrontation among operators and organizations involved in the realization of the project. The first results of our project observations record that the patients’ attention and participation increased gradually and even with growing enthusiasm. Also the already discharged patients came constantly to every meeting (twice a week) confirming not only the therapeutic value of the horticultural therapy but also further features of the validity to the recent theories about its benefits. The patients involved in the project have all obtained psychological and physical advantages and helpful basic competences for their future social and working.

References
Cooperativa Sociale Alice. 1998. Progetto Riabilitativo attraverso la Produzione Ortofloroivaistica per Utenti con Disabilità Psicofisica, Tarquinia.
Researching the business ideas of Finnish green care farms


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In Finland, there are few of farms that would consciously and actively use their resources for therapeutic purposes although there are nursing homes that are situated in farm environment. Our research project focuses on the pilot enterprises which have started these kinds of activities. The aim is to describe their core business ideas and to identify the special weaknesses as well as the potentials of the enterprises. Particularly, we are interested in the role of agriculture and farming in their business idea.

Research team constitutes of multidisciplinary scientists: economist will study the premises of financial management, architecture will analyse the physical environment and the socio-cultural subtask will pay attention on the way that the cultural elements are utilized.

Data collection and analysing has been done during this spring and first results will be available in the conference.
The creativity in green care activities

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The socio-cultural perspective
The paper deals with the creative and innovative contents of the green care practises, and their possible effects on the human well being. Our theoretical starting point comes from socio-cultural discussions about the meaning of place and about the capacity of a place and its surroundings to function as “raw material” for creativity and innovativity. With “place” we refer to the context of the care farm and the surroundings experienced by individuals. The second theoretical basis comes from futures studies: as the care farm activities in Finland are merely signals of new ideas about to break through, it is important to emphasize the possibilities and obstacles of the care farm activities for future creativity and well-being. We will discuss the socio-cultural aspects of the innovations modifying Rolf Jensen’s ideas about the dreams and imagination as different market powers.

- How can the socio-cultural methods and understanding support the transdisciplinary efforts to research the many future possibilities of green care?

The aim of the project is to describe the core business ideas and to identify the special weaknesses as well as the potentials of the enterprises. Our research team constitutes of multidisciplinary scientists from two organizations (Finland Futures Research Centre & MTT Agrifood Research Finland). Research team constitutes of multidisciplinary scientists in two organizations: an economist will study the premises of financial management, an architect will analyse the physical environment and the socio-cultural subtask will pay attention on the way that the cultural elements are utilized.

The future-oriented socio-cultural part of the study involves participatory methods (future workshops) where ideas and knowledge are reflected and created in different contexts. As the main concepts come from the developers, it is important to start new discussions and processes where the participants own ideas could lead to more concrete innovations, networks and action => new economy based on the individual creativity.

References
Agricultural England
There are many definitions, both unofficial and official, that can be used to identify rural England. The dominant role of agriculture in determining the character of the English landscape, and the intuitive recognition that farming is the signature occupation of the countryside, justifies a separate consideration of those areas where farmland per head of local population is most significant. An illustrative map indicates the localities which comprise Agricultural England on this basis. This area contains more than half the country’s farmland and accounts for more than half of all cereals, vegetables, horticulture, meat, dairy and other livestock products. The population of Agricultural England equates to the population of London (a particularly dominating capital city: much larger than the next six largest English cities put together). The countryside has a disproportionately large share of skilled tradespeople and of the self-employed (even when farmers are taken out of the account). The countryside contains only a relatively small proportion of those who have been unemployed for a long time or who have never worked.

Age in the Countryside
Whilst the Metro-urban areas and elsewhere differ only slightly from the overall English pattern, London and the countryside present complementary variations in population structure. Younger adults (16-44 years of age) are a relatively lower fraction of people resident in the countryside and a relatively higher fraction of those living in London. Balancing this, older adults (over 45 years of age) represent a relatively higher fraction of the population resident in the countryside and a relatively lower fraction of those living in London. There seems to be a balancing life-cycle pattern in which younger people migrate from the countryside into London just as older people reverse the process. London’s population structure is not very like that anywhere else in England; whereas the countryside’s population structure is generally more like that everywhere other than London. Concentrating on the retirement age population (those over 64) shows the most marked differences: London with a smaller proportion than England as a whole; the countryside with a greater proportion; the Metro-urban areas and elsewhere reflect the national average. It does not seem self-evident that the scale of the difference in local retired populations on a proportionate basis is sufficient to justify alarm about demographic developments in rural England particularly.

Long-Term Illness and the General State of Health
There are numerous problems associated with the interpretation of statistics reporting self-evaluation of states of health. However, it is interesting to note that the fraction of the population reporting good health is lowest in the Metro-urban areas whilst the fraction not in good health is highest there. The incidence of long-term illness, sufficient to appreciably limit everyday activities or employment opportunities, equates to one-in-five of the population all across England (with the proportion being slightly higher in the Metro-urban areas). This is a substantial group within every local community.

The Prevalence of Care
Because a substantial proportion of the population is living with a limiting long-term illness, health problem or disability which limits daily activities or work, it comes as no surprise that provision of informal or unpaid care is widespread across all localities and amongst those engaged in all sorts of occupations. One in ten of the population is involved. It is a responsibility especially undertaken by the middle-aged, who may find themselves caring both for the next and for the previous generation. One in five of those aged 50-64 devote part of their lives to it. There is very little observable difference in the composition of the informal care-force between different localities. The majority are
women (60%). A sizable group of those providing care do so in addition to looking after home and family.

Age, Health, Farms and Social Enterprise
The most striking characterisation of the countryside is that it constitutes a relatively prosperous residential environment, albeit a relatively sparsely populated one. Households in rural areas and in London deploy levels of spending substantially greater than those of households in the Metro-urban centres or in the rest of the country. In these circumstances it can be expected that effective demand for non-standard, niche or premium care services will express itself especially strongly in the countryside. In parallel with this, since there are irreducible distance-related costs of public service provision in rural localities, there will be an incentive for local authorities to avoid direct delivery of (standard) care. Because farmers are a significant fraction of rural entrepreneurs (25% in Agricultural England), and because the introduction of the Single Farm Payment has heightened their sensitivity to the environmental amenity value of farming, it should be no surprise that farm-based care-providing businesses are emerging. The small scale of such enterprises is conducive to customisation and innovation in working practices. Private enterprises that fulfil a social purpose such as care provision will particularly benefit from encouragement in rural areas. The rehabilitative qualities of the rural environment and working on farms are being recognised by those people involved in commissioning. A brokerage role which aggregates individual suppliers to match the requirements of public sector commissioning is a platform for successful social enterprise. The National Care Farming Initiative is a nascent model of such collaborative engagement involving purchasers and providers of care services on farms.

Sources of Evidence
Green Care and Social Enterprises in Italian Agriculture

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Social Enterprises which were considered marginal and of small economical relevance until some years ago, have come to the attention not only of the public opinion and policy makers, but also of economists. This has come about due to the considerable growth in their number, the relative employees and their economic dimension. This evolution of Social Enterprises has taken place in all of the European countries, from those with a wide choice of social utility services to those with a welfare system in which the sector of social utilities, and consequently the presence of the relative structures, were not well developed.

In Italy the fabric of social enterprises is mainly characterised by small organisations with a strong democratic connotation, a high recurrence of volunteer work, strong ties (of a financial kind, but of other kinds, too) with local administrations and an orientation mainly towards social services.

The proposed work is inserted into this picture, proposing the objective of describing the phenomenon of Social Enterprises in Italian agriculture and of analysing the characteristics and evolution in relation to their function of structures for the development of Green Care activities and projects.

In this study, having defined Social Enterprises within their normative terms, the attention is focussed on the realities whose activities are entirely or partly concentrated in the agricultural sector. Subsequently a dimensional and territorial identification of the phenomenon is provided, and the analysis of the characteristics of the government, the managerial instruments, the ability to put down roots in the local community, the presence and type of the disadvantaged workers involved and the capacity of creating economic value is carried out.

In the last part of the study, the attention is concentrated on the analysis and description of two study cases which are considered as being representative of the main approaches to Green Care in the Italian Social Enterprises.
Green Care Policies in Austria

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Austrian Green Care institutions and policies applied are quite heterogeneous in terms of persons involved (actors, target groups, clients, administration), ideologies, schemes and models. Small scale units - many of them family based - are prevailing. Many institutions are quite isolated, networking and knowledge exchange is weak. Master plans are lacking in many cases so patterns emerge more or less unintentionally as a result of trial and error. Another problem is that the terms Green Care and Farming for Health are not clearly distinguished yet in daily practise.

Main actors involved
Different target groups can be discerned which are tackled by green care schemes, horticultural or animal assisted therapy to a certain extent:

- Handicapped and disabled persons
- Psychiatric clients
- Alcohol and drug addicts
- Children: school gardens, kindergartens
- Elderly persons: geriatric hospitals
- Intercultural Exchange, refugees, migrants, community gardens
- Hospices, children hospices
- Detainees, released convicts
- Further fringe groups

There is also an on-going discussion on general positive effect of nature on human being regarding stress, burn-out and depression. Public welfare, geriatric and psychiatric hospitals, health administration and physicians are mainly interested in health benefits and in cost efficiency.

During the last few decades several organisations and institutions have been established in the field of green care. In most cases public support was rather feeble. Besides that strict legal regulations and structural deficiencies prove to be major obstacles. Despite all these problems a number of rather innovative projects could be initiated during the last few years. Currently there is an intensive debate on different new interdisciplinary approaches integrating several target groups within one single project.

Main organisation of services in each country
The number of institutions involved in green care can be estimated between 20 and 25, the number of clients between 200 and 300.

Therapeutic institutions in agriculture and horticulture are mainly run and organised by the churches (catholic caritas and deaconry), social welfare institutions, psychiatric and geriatric hospitals, various private organisations and the Länder (provinces) but not by the state or governmental boards.

Main policies that are already working related to green care
There are barely official policies existing yet which are explicitly promoting green care schemes. The general situation can be characterised by lack of information, awareness and understanding. However several laws and acts can be considered as highly relevant for green care.
Handicapped and disabled persons comprise the most important target group. The core issue is social integration and improvement of life quality. The measures applied are according to the level of disabilities.

**Anti-discrimination act 2005**
This basic act aims at eliminating every sort of discrimination of persons suffering from mental or physical disabilities and simultaneously promoting their equal participation in society and an autonomous way of life. The provinces (Länder) introduced implementation acts during the last few years.

**Labour act for disabled persons 1999**
All employers with at least 25 employees are obliged to employ one disabled person for each 25 employees or to pay compensatory taxes.

**Integration into the primary or secondary labour market:** employment, utmost degree of independence and autonomy, work assistance

Disabled persons who can reach at least 50 percent of the performance quota laid down for the able-bodied may be employed in sheltered workshops or work assistance centres. The provincial laws stipulate that the difference between the actual work performance and the wages guaranteed by collective agreement. Agriculture and horticulture are frequent fields of work. Unfortunately most sheltered workshops fail to meet their objective of integrating disabled persons into the general labour market since there is a high rate of general unemployment particularly amongst young people. Apprentice farming and horticultural therapy can be considered as special integration schemes within this frame. The emphasis is put on teaching young disabled persons practical skills in the fields of agriculture, horticulture or housekeeping to encourage their integration into society. Unlike in other countries there is no guarantee of employment and no fixed ratio between care persons and clients.

**Long-time care and nursing** encompass institutions providing accommodation and care to persons who are too severely disabled for meeting the minimum requirements of sheltered work. Since nature and contact to animals is considered to have a positive impact there are many farms and institutions in rural areas dealing with farm work. A prerequisite is to keep certain care standards guaranteeing that the disabled are treated and looked after properly. Thus persons running such shops either need special training or are forced to employ professional employees. Daily care rates are paid for the nursing of the disabled by the government.

**Federal law for care benefit 1993** introduced standardized nursing allowances eligible to all persons in need of care due to a physical, psychological or mental disease or handicap. Nursing needs are officially regulated and divided into 7 levels. The monthly amount is ranging from 148.30 € (level 1) to 1562.10 € (level 7) in 2007. The nursing allowances are suspended after the second day of hospital or institutional treatment whenever the expenses are covered by the insurance agency, government or hospital.

**Recent trends**
There is a tendency towards a broader discussion involving more people, institutions and professions and new target groups in a more interdisciplinary approach. The contribution of nature in health reform is more and more recognised.
Conceptualisation of the regional net of social farms

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Background

Also invisible and without any institutional support from the systems of agriculture and social welfare there is a lot of good examples of interlacing of and cooperation between agriculture and farming and social welfare in Slovenia. They are professionally planed, organized and carrying out by the practitioners who are looking for the best solutions in favor of the people with special needs and their inclusion into a general society. Feasibility study on interlacing agriculture and social care showed that relevant stakeholders, farmers and users in particular, are in favor of such type of community-based social care. Furthermore, case studies of different examples of good practice provide additional information about the possible scale of this interlacing.

Aim and method

The aim of the research is to model a network of social services for the mentally disabled provided by the family farms as supplementary on-farm activity and to quantify it. The general model of building up a network of social care services is applied and adopted to needs of the mentally disabled, as well as to particularities of green care. Model contains four sets of indicators: principles (equal opportunities, solidarity, accessibility, economics, pro-choice), measures (needs; number and structure of potential users, actual programs, available human and other resources; spatial and logistic characteristics, organization, standards), holders (of planning; implementation/execution, control) and outer stipulations (general values and standpoints, awareness and organization of potential users, concept of development of agriculture, as well as social care, legal framework, available resources). The elements of the model were studied for two sets of social services that correspond to two target groups of potential users: mentally disabled children and mentally disabled adults in the region of the Administrative Unit of Ljubljana.

Results

Children and youth

Table 1: Mentally disabled children and youth as potential users of green care

<table>
<thead>
<tr>
<th>Target group</th>
<th>Number of potential users</th>
<th>Actual programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children and youth</td>
<td>377</td>
<td></td>
</tr>
<tr>
<td>Preschool children</td>
<td>61</td>
<td>Education and training</td>
</tr>
<tr>
<td>School children and youth</td>
<td>107</td>
<td>Education and training</td>
</tr>
<tr>
<td>Institutionalized children and youth</td>
<td>209</td>
<td>All-day care; education and training</td>
</tr>
</tbody>
</table>

Table 2: Potential capacities of green care programs for mentally disabled children and youth

<table>
<thead>
<tr>
<th>Green care activity</th>
<th>Frequency</th>
<th>Days/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visiting a farm</td>
<td>4 time per year (seasons) in groups of 10; if possible 2 visits/day</td>
<td>148 (1 visit/day); 74 (2 visits/day)</td>
</tr>
<tr>
<td>Day excursion</td>
<td>Once per year in groups of 10</td>
<td>37</td>
</tr>
</tbody>
</table>

Table 3: Potential capacities of green care programs for mentally disabled children and youth (cont.)

| Learning             | Youth (1/3 of 370) 4 time per year (seasons) in groups of 5 for a hole day | 86       |

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Oral presentations WG 3

| Weekend-holidays | 1/3 of children and youth 4 weekends (seasons) | 500 |
| “School in nature” | Once per year each pupil spend 14 days on a farm | 481 |
| **Total** | | **1176 -1252** |

**Adults**

Estimated number of mentally disabled adults who might be included into green care programs is 532 (accident of mental disability at 0.4 % of total population (minus children and youth); approximately 2/3 of parents/guardians is in favor of green care programs). Actual programs for this target group are: long-life education, occupation and/or employment (deficit), group-homes and/or all-day social care (deficit) and free-time activities.

**Table 4: Potential capacities of green care programs for mentally disabled adults**

<table>
<thead>
<tr>
<th>Green care activity</th>
<th>Posts/year</th>
<th>Days/year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Long-life education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivating and experiencing visits of a farm</td>
<td>300</td>
<td>…</td>
</tr>
<tr>
<td>Learning</td>
<td>..-</td>
<td></td>
</tr>
<tr>
<td><strong>Occupational activities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflow of graduates</td>
<td>10</td>
<td>200</td>
</tr>
<tr>
<td>Diversification of activities</td>
<td>266</td>
<td>200</td>
</tr>
<tr>
<td><strong>All-day care</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permanent on-farm residence</td>
<td>15</td>
<td>365</td>
</tr>
<tr>
<td>At-times on-farm residence</td>
<td>50-200</td>
<td>…</td>
</tr>
<tr>
<td>Permanent care</td>
<td>3-5</td>
<td>365</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>644-796</strong></td>
</tr>
<tr>
<td><strong>Free-time activities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day-excursions (once per year in groups of 10)</td>
<td>-</td>
<td>35</td>
</tr>
<tr>
<td>Weekend-holidays</td>
<td>350</td>
<td>700</td>
</tr>
<tr>
<td>Holydays (14 days; winter, summer)</td>
<td>350</td>
<td>4450</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>5185</strong></td>
</tr>
</tbody>
</table>

1 Individual visits of a potential user once per year in duration of 3 years (gradual inclusion into a farm) aimed to motivate mentally disabled and their parents/guardians for more permanent green care arrangements
2 As gaining new knowledge and skills can be attained only by on-farm occupations these needs are included into estimation of occupational activities.
3 Regular on-farm activities-occupations 5 day/week during the whole year

**Table 5: Estimated number of farms to meet needs for green care activities form mentally disabled by type if activity**

<table>
<thead>
<tr>
<th>Types of green care activities</th>
<th>Number of farms</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-farm visits and learning</td>
<td>4</td>
</tr>
<tr>
<td>On-farm learning and occupations</td>
<td>150-300 (1-2 users/farm); 50-100 (3-6 users/farm)</td>
</tr>
<tr>
<td>On-farm learning, occupation and permanent residence</td>
<td>25</td>
</tr>
<tr>
<td>2 for short-term at times residence</td>
<td></td>
</tr>
<tr>
<td>On-farm free-time activities</td>
<td>5 (with capacity at lest 10 persons/day)</td>
</tr>
<tr>
<td>Permanent care</td>
<td>2-5</td>
</tr>
</tbody>
</table>

**Conclusion**

Modeling and quantification of the network of green care farms in the Administrative District of Ljubljana shows that about 90 – 140 green care farms may meet needs of the local potential mentally disabled users. Out of this number of the farms 10 would be oriented to provision of visits and free time activities, 30 would provide permanent residence and occupations, while 50 (up to 100) would be oriented to training and occupations.

**References**

Analysis of Social Farming in Germany:
outcomes of the national meeting

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SoFar – social services in multifunctional farms
SoFar is a multi-country specific support action for research policy, funded by European Commission (Sixth Framework Programme VI for research, innovation and technological development). The project has a duration of 30 months (starting date: 25-4-2006) and aims to support the building of a new institutional environment for social farming, providing linkage of research to practitioners/rural players and bringing diverse European experiences closer, in order to compare, exchange and coordinate experiences and efforts. The different phases include fact-finding, the development of ‘platforms’ at regional and European scale, and dissemination activities.

What is social farming?
All over Europe farming contributes to social activities in rural areas. But social farming means more: The classical economic sectors of a commercial farm, garden or landscape maintaining enterprise are widened by providing space for disadvantaged people in order to recreate, educate, therapy or even employ them. Those integrated “clients” might be people recovering from drug addiction, psychiatric, mental or physical diseases or handicaps, long term unemployed, people with depression or burnout, homeless, former prisoners, young people from youth welfare work, old people suffering dementia or still active contributors to farm life and children. Social farms being part of a sheltered workshop for disabled people (WfbM), schoolfarms or kindergarten farms provide the rhythms of nature as an experience for the different groups of clients. Social farming means a perspective of multifunctional agriculture and an alternative to further reduction of expensive human labour in farming systems.

The national platform in Germany
At the 11th of May 2007 the German project partner of the European SoFar-Project (Research Institute of Organic Farming (FiBL Germany) invited 22 experts and stakeholders being concerned with the topic of social farming to meet in Kassel and to contribute to the exchange of ideas in order to develop a national innovation strategy of social farming on national level.

The participants of the workshop
The participants of the workshop were chosen carefully. Not only stakeholders from the diverse sectors of social farming (different client groups: people with handicaps (4), drug addicts (2), school farms (3), minors (2)) should get included but also from different levels (such as practitioners (10), rural players (2), researchers (3), representatives from policy (1) and administration (1) as well as representatives from networks and associations (4)). Farmers and practitioners of social farming were most interested to participate. For some client groups (emigrants, convicts, elderly) and for some levels (national politics, (social) administration, medicinal research ...) no representatives could be found or gained.

The structure and outcomes of the workshop
The workshop started with a glance at the state of the art and the aims of the SoFar project as well as an introduction of each participant and his/her expectations of the workshop. Then three phases (diagnostic phase, visionary phase and strategic action plan) followed, each starting with participative group work alternating with plenary sessions in which the outcomes of the group works were presented. This structure should enable all participants to join and contribute discussion vividly.

The main topic of discussion was the conception of social farming (role of the farmer, common ground of the different social farming approaches and the possible ways of a common strategic
action). There is a demand for transparency (in the structure of social services, networks and associations) and for secure financing. Support is needed to foster the appreciation and recognition of social farming in society, administration and politics. Strategic actions should therefore aim at developing and promoting social farming (research on the benefits, raise public awareness), enhance transparency on all levels and connect networks and associations that exist already.

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van Elsen, T., Kalisch, M. 2007: Social Farming in Germany.— Report, SoFar project (Social Services in Multifunctional Farms).— FiBL Deutschland e.V., Witzenhausen, 39 pp.
Living Learning
-The farm as a pedagogical resource-

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At the Section for Teaching and Teacher Education at the Norwegian Life Science University we work with building bridges between farm and garden activities and the schools of general education. Our initial project, “Living School”, from 1996 to 2000, took its point of departure from the question: “How can we contribute to fostering hope, courage and resolve in children in order for them to be able to participate in a productive way in the forming of their surroundings?” More concretely, the goal was to create pedagogical “provinces” in which a committed, caring and continuous work with nature could occur to enable an enduring experience of connection and belonging. “Green care” is thus seen at our institute as an essential basis for building health in children, as a prerequisite for learning.

This is in accordance with one of the most basic tenets of the theory of salutogenesis (Antonovsky, 1997) which states that one important premise for development of sound health is to be found in the experience of coherence. This is to be understood not only as an experience of, and insight into, the origins of objects of our daily lives, but also an experience of being able to contribute to and effect the connections surrounding us. Such as the researcher of early child development, Martin Dornes, writes: “Not only joy in bodily activity and play, but also the joy of discovery and the feeling of being able to effect and understand meaningful relationships in the world are central motives from the beginning of life (Dornes, 1993).

Characteristic aspects of modern childhood

When we make an attempt to experience the world today in Western countries through the eyes of a child, we can easily understand that they meet a complex, fragmented and confusing structure in daily life. Milk comes in cartons, fish in rectangular boxes, heating from floors or vents, furniture and building materials from delivery trucks and clothes from fashionable shops. Insight into how food is produced in nature, where textiles and building materials come from or how inside temperature is created is removed from their experience. In addition most children see their parents disappear each day to unknown places and activities, at the same time as they themselves are placed within the four walls of childcare institutions, many already at a few months of age. In spite of early access to the world wide web, children are in a large degree cut off from participation and understanding of the basic tenets for daily life. Such a bird’s eye view of childhood makes plausible the fact that pre-school children are the largest growing consumer group on the market for anti-depressive medicines in USA today (Louv, 2005).

How children's health is affected by their environment is seen clearly in the increase of both psychological and physical illnesses such as asthma and allergies, anorexia and bulimia, obesity and diabetes, hyperactivity (ADHD or ADD) and dyslexia (reading disability), to name the most frequent. The rapid acceleration of such health problems rules out genetic causes and demands a reassessment of the conditions for childhood. Amount of time indoors, time spent in passive activity, the lack of free movement and play outdoors are factors which have been identified, whereas the lack of transparency of, and occasion to contribute to, daily life have not yet become issues in the public consciousness. As one professor of pedagogy asks in Norway, is it not possible that children are tired at school and lack interest in learning because they lack a meaningful context for their learning and see neither how things are connected to each other nor how they themselves can make any difference (Tiller, 2003).
What can farms contribute?

Through our courses with farms and schools we see the effects of repeated work-periods at the farm. The farm work provides “meaningful contexts” where the children are motivated to learn through practical experience that sheds light on the origin of products in their daily life. Concrete tasks give them insight into ecological connections and man’s place in nature. Development of manual dexterity strengthens the foundation for learning in all subjects, at the same time as they learn to cooperate and solve problems as they arrive. The children or youth can learn with their bodies and senses which is not only the basis for enduring memory, but also essential for physical health. Outside in nature they connect to other living organisms - a prerequisite for stewardship and engagement in environmental issues. As a leading American educator, David Sobel, writes: “One takes care of what one loves” (Sobel, 1996), When children feel their contribution to caring for animals or plants is needed, it reinforces their identity and gives them self-confidence.

All these aspects and many more apply in even greater degree for the increasing number of pupils who are “losers” at schools. The children with diagnoses, with concentration problems or psychological crises are those which need what farms and farmers can give them most of all. Many children today cannot be in classes without personal assistants and daily medication. The school, not the health authorities, has the responsibility for these pupils, but cannot offer them adequate alternatives within the four walls of the school. Farms can offer an arena which is necessary to fulfil the obligation of the school for meeting the needs of the child.

The continuation of the work between farms and schools in Norway

After the initial pioneer project which was supported by the Departments of Education, Agriculture, Culture and Environment with 1 million euro, the work has continued mostly in the form of accredited courses given in different regions of the country. While the project succeeded in producing examples of school gardens (eight schools) and school-farm cooperation (eight farms) in pilot projects scattered throughout Norway, there was a need to develop regional models which were rooted in the local communities. At the present time there are parallel courses in several regions and the demand for courses is more than can be complied with. The courses are supported by the regional agriculture authorities and the national development agency for rural projects, Innovation Norway, provides funding for farms in trial periods and for capital investments. The national school authorities have not yet become sufficiently engaged in the development of projects. A number of local governments see the farm-school cooperation as a way to ensure population stability in vulnerable regions. Through an experience of rootedness in the local community during school age, the authorities hope that more people will wish to move back after finishing there education other places.

Although there is rapid growth on the grassroots level, there is a need for research on the effects of farm-school cooperation, especially as to the learning benefits with which the farm arena can contribute. At the present time farm-school cooperation forms the largest group of farms engaged in a production of societal services (Fjeldavli and Meistad, 2004).

References

Health and Care Park Hengelo (NL)

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About the subject
Location: Hengelo (Overijssel) Netherlands, Agglomeration Twente, 235,000 inhabitants
Area: 50 ha
Charged by: Hengelo Town Council
Institutes: Existing: Hospital (SMT), Geriatric clinic (Trivium), Family-care (Carint)
In development: Ortho-pedagogy (Accare/de Eik), Care for Youth (Jarabee)
Education (SSTS)
Projected: housing, care centre for elderly people, centre for facilities, wellness

The beginning
In 2003, Op ten Noort-Blijdenstein Architects were approached by the Hengelo Town Council to solve an urban development problem: the proposed development of a health care facility. At that moment there was no idea about a common target among stakeholders, neither in organisation nor in green areas management. Moreover, the absence of progress during foregoing years had led to stagnation. We started by asking the stakeholders about their ideas and targets. By organising a series of workshops, we managed to foster a common sense of agreement about the targets and the meaning of a health and care park.
Changing Health Policy in the Netherlands

In 2005 the Dutch Government policy moved from centrally regulated health to a market oriented care. Some tasks for family care and social work were transferred from the central government to the local communities (Legal aid, the Law on Social Facilities (Wmo), etc). Hengelo was therefore thrust into the role of a participant in the concept of the Care-park.

‘The Hague’ no longer spends money directly on care, or does so with restrictions. The clients are now required to insure themselves privately, and their insurers purchase care on the health market. Clients are free to choose care institutes, within certain limits. Hospitals and clinics responsible for their budgets and have to compete in the market to remain attractive for the consumer. There is a quality-control system operated by the clients themselves.

Park Management

There is a need for increased collaboration in Hengelo. While there is a general agreement in about the common interests of the participants who will share the costs and benefits, consensus had to be reached regarding common facilities, environmental politics and the therapy-gardens.

The process of reaching full agreement and implementation required a dedicated and knowledgeable person, because of so many unknown factors and the newness of the concept. Associate Consultant Bert Jeucken (modm) organised five workshops, visited the various participants and organised an excursion to Clinic Holthausen in Germany for the financial concept and to meet Andreas Niepel, the proponent of therapeutic gardens, in order to convince the participants about green care.

The vision on health and nature

Op ten Noort Blijdenstein Architects incorporate existent landscape patterns in urban development as much as possible. Without being overly conservative, we integrate existing elements in new patterns (transition). Hengelo has a strong and valuable rural landscape, rustic farmhouses and beautiful old oaks. We made a master plan based on the fundamental patterns of the topography, the habitation and the nature. By doing this we preserved the general identity of the place. Nevertheless there are big changes. For example, in we planned three-acre pool in the centre, and surrounding buildings of modern architecture.

There is an internal network of walks connected with the surrounding rural landscape. All along the walks there are special places for activities or landscape themes. We call them ‘therapy-walks’ because they harness the therapeutic powers of nature. Developmental costs will be financed by the exploitation of the area itself (land sales).

By visiting the therapy gardens of Frits Neuhauser in Vienna, we got an idea about the more detailed impact of nature on therapy. Later we got in contact with Andreas Niepel in Hattingen, Germany. We are convinced that the institutes should develop therapy-gardens for their special clients. These patients vary, but mostly have mental and physiotherapeutic needs.

At the moment, we are the supervisors for the Health and Care Park, and we are not involved in the buildings and the gardens. But we give the idea of green care place and dimension.

A strong concept works

In the beginning 2003 some institutes already had plans for new buildings and surroundings. After the emergence of a new master plan, they changed location to take advantage of better placement. In the meantime more participants consider nature’s influence on the healing process. But even now the idea of green care meets some scepticism. The main obstacle is financing of the green areas; budgets for green space are traditionally secondary to those for buildings. The institutes have made no budgetary provisions for therapy gardens at this moment. Park management can help to realize them.

We sincerely hope to convince Hengelo and the health providers of the therapeutic value of gardens and parks. Better health and successful therapies would eventually lead to patient satisfaction and a competitive edge in the new free market. Once the participants are agreeable and only the financial constraints remain, we could work together to obtain funding through the EU’s ‘agenda 2007-2013’.
Science and policy of Farming for health

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The paper discusses farming for health within a context of policy and science. The scene is Norway, but some issues are international. We first present some Norwegian Governmental policy documents and the intentions regarding plans and projects. Secondly we present some main features regarding science in this field. An important document regarding policy about Farming for health is the “Document of Agricultural occupational strategies” of the Ministry of Agriculture and Food (http://www.regjeringen.no/nb/dep/lmd). Another important document is the Action plan for strengthening the field and projects “Into the courtyard” managed by the committee of the “Arena of Into the Courtyard”. The intention and plan of actions of the policy we compare to a proactive project; The “Nature and health” project in the County of Sør-Trøndelag, run by the County Governor of Agriculture and collaborated by the regional Hospital of St. Olav, the municipal of Trondheim City, the Norwegian Labour and Welfare organisation, the patient organisation of Mental Health. Choosing this project is due to the fact that we have better knowledge about it than about others. There are methodological based arguments both for choosing other projects and more than one project. Respectively the scientific focus in the paper we analyse the theoretical perspectives in some few articles in the publication “Farming for health across Europe and the United States of America” (Hassink and van Dijk, 2006) and a few Norwegian national research projects.

The purpose of this discussion is to outline a qualified perspective in the debate of the phenomenon of Farming for health related to both politics and science. The bottle necks and challenges in the field are the last couple of years described as issues about contracts, securing of quality of the services and developing a quality standard off the services, competence and organising. Which concrete proposals are set forth to contribute to the solutions about challenges and bottle necks? Do scientific discourses relate to the political and practical challenges in the field, and in what way?

The theoretical point of departure is social constructivism. The definitions of the concepts of science, policy, nature and health are flexible and unstable phenomenon which are changing regarding content and meaning. Consequently health as a meaningful concept is not simply diluted versions of medical knowledge. The sociology of health is more likely to raise a critic stance of biomedicine (Nettleton 2000, Freidsson 1988). An approach through policy and politics include a focus on the legitimacy both of agriculture in society and of public health care systems. For instance is spending of public means and measures to private “makers” through partnership (of farming for health) not necessary fully accepted at a general societal level. Neither are “alternative” treatments within health care clearly defined. Our aim is still to illustrate a situation, rather than come to complete or concrete statements and conclusions.

The theoretical perspectives of policy include a dissection of the term of policy: divided the policy and politics with respect to plans, intentions and actions. The perspective of sciences include a dissection of the therapies (horticultural, animal-assisted, agricultural, landscape etc) of Farming for health and the theoretical grounds of these therapies which are at focus and reflects and reframe the some of the results of researches. By using a discourse analysis as a methodological tool we describe and dissect the texts (written and oral) of scientific and public policy documents.

Policy of intention and politics of action concerning Farming for health
The etymological distinction between concepts of policy and politics is problematic regarding Norwegian conditions. In every day life we often use one word for several situations (of policy/politic) but the context and the reframing discourse defines the meaning we put into it. In the paper we make a distinction between political processes as “a set of ideas and proposals for action culminating in a
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government decision” (Jones et al 2001, pp 9/528) and the policy constituted in the concrete actions. We therefore shortly present the Norwegians definitions for those different two terms. “Politics as a process which seeks to manage or resolve conflicts of interests between people (op.cit), and policy as mention above, Winter (2001:30) shows that there is a dynamic dialectic connection between the two concepts. Politics determines policy and policy determines politics. Policy is a plan of action adopted by, for example, an individual, group or government (Heywood 2002:400). Policy may be seen as the formal and written decision of government bodies. Policy is however also the linkage between intentions, actions and results. At the level of intentions policy reflects what is said to be done (written in Governmental documents and White papers). At the level of actions policy is reflected in the behaviour of government (what are actually being done). What actually is being done might culminate both at state, county and municipal level due to the Norwegian public system. At the level of results policy reflects the consequences of the government action (the impact of government on the larger society) (Heywood, 2002:400). In this paper there will be lesser focus upon the political processes and discussions leading to formal statements, but more on the statements themselves (as texts) in documents and on actions (as an ongoing project).

Scientific focus: research concepts and outcomes

Underlying the scientific theoretical approach to the research field is the questions about the role of man in nature, or the human-nature relationship. Human images about mans position and roles in nature have changed within historic, cultural scientific and religious perspectives, constituted the paradigms which definition and knowledge are significant within the respective perspectives. The paradigmatic aspect of the “world view” plays a significant role evaluating and framing the different theoretical aspects. Seippel (1995) distinguished between three main groups of perspectives on nature. The first is a traditional religious perspective on a mythical and religious worldview. Another has a point of departure in value questioning what values are ascribed to nature. Seippel structured the human-nature relationship in an egocentric and an anthropocentric worldview. Through humanism (both Christian and non-Christian) and naturalism (Darwin) the main dimensions of the relationship in focus, have also seen man and nature in a structural perspective; either as a hierarchic or a more plain structure. A main distinction focusing the human-nature relationships is either a harmony or a conflict situation. The modern ideology of folk health sees nature as consisting of un-wished and human-enemy phenomenon; like nature spoiling humanity (conflict). The ideology of environmental break-down (climatic changing) sees both human and nature as threatened and human as a contributor to the break-down. The ideologies of Farming for health, however, rely on a model of harmony regarding the human-nature relationship (the biophilia hypothesis); nature-near activities are potential pleasures and salutogens for humans. The Biophilia hypothesis provides the underlying philosophy for all aspects of human-environmental interaction considering health and welfare is adapted to the environmental milieu which human evolution is integrated (Relf in Hassink and van Dijk). The sociology of policy and science sees the human-nature relationship as more complex and we question and challenge the Biophilia hypotesis.

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Chances for social farming due to changing paradigms in health care

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Changing paradigms in health care
Most of the persons that benefit from social farming are persons with chronic problems. Examples are elderly people, adults with mental and psychiatric problems and youth with psychiatric and social problems.

Until quite recently the medical model was dominant in health care. In this model, treatment of the disease or handicap is the core. In this view people with a disease or handicap are isolated from society and treated by experts. In this paradigm professionals in health care use well defined protocols to cure patients.

During the last decades of the last century, new paradigms in health care developed. The integration model was followed by the support and citizen model. The central idea of this last model is that people with a handicap are in the first place citizens of the society and not patients.

Community care
Community care and community support are central ideas in this new paradigm of health care. It is widely accepted as the focus in health policy in many countries. It has close links with the rehabilitation movement in psychiatric health care. Community care means care in the society by the society and not by health care professionals alone. An important role is reserved for non professionals. This contributes to one of the main goals: increase in empowerment of people with a handicap.

Ideally, other sectors of society should become responsible for providing community care. The problem is that developments in society are not in favor of community care. The focus on profitability in society is one of the barriers for the ideal of community care. The only sector that seems to take responsibility for people with chronic problems is agriculture. The combination of agriculture and care can be a perfect example of the desired changes in society leading leading to full citizenship of people with a handicap and community care. The challenge for the care farming sector is to make clear how it contributes to policy goals such as community care and which types of social farms contribute most to it. This will strengthen the position of this new sector.

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Education in Green Care.
A first European overview of the provision in education and training for Green Care workers.

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Specific competences for Green Care
There is increasing attention throughout Europe for Green Care and its potential to improve the well-being and social inclusion of socially, physically or mentally less privileged people, while in the mean time enhancing rural development. Many initiatives are currently being developed in the practice of health care and of agriculture in Europe. But are there enough possibilities for education and training in the specific competencies that are required for Green Care? This paper presents the results of an inventory of educational provision for Green Care in Europe as part of the COST Action 866 Green Care (www.umb.no/greencare). The study builds upon the Action’s results thus far and upon the materials developed in the Community of Practice Farming for Health (see Hassink & Van Dijk, 2006; www.farmingforhealth.org). Since the survey is still running, the below information must be considered as provisional. Suggestions for complementary material are welcomed very much.

Limited provision in education and training
Well-established educational activities regarding Green Care are still limited.
- University programmes in this area have started in Norway (Norwegian Life Science University, Arstun Education and therapeutic centre), Austria (ÖGG / Donau University Krems), Sweden and Italy (Italian Association for Organic Agriculture).
- In the Netherlands educational programmes are developed for the clients in need to teach them how to be a good assistant of the farmer, as well as for farmers to be a professional Green Care farm manager. International exchange of educational programmes in the context of Green Care is initiated by the Centre of Expertise Agriculture and Care in Dronten, The Netherlands.
- In the last few years, several organisations in Flanders have conducted training sessions that deal with Green Care.
- In Sweden courses are offered at university level: one qualified vocational training to become an educationalist in health science, and nature and culture in particular, and one education to become a gardener with particular skills in environment, health and leadership.
- ‘Horticultural therapist’ is an informal term in Germany. People working in this field have a heterogeneous educational background: they may be gardeners or farmers, but also nurses, occupational or work therapists, sometimes psychologists or educators, or they may even have other educational backgrounds. Lectures on horticultural therapy have been presented temporarily at the universities of Hannover, Bonn and Dresden. A growing number of theses has been written regarding horticultural-therapy issues during the last 15 years. Preparations for a horticultural-therapy curriculum are on their way at several Professional Universities.
- In Switzerland the project INTEGRATION sustains a network with the ZSB (Centre for systemic therapy and advice Berne), which is given the task of education and further training of the partner families.
- In UK courses in Social and Therapeutic Horticulture are offered in Coventry University and Nottingham University.

Conclusion: large demand for organised education and training
It is concluded that although scattered education and training provision for Green Care exists in Europe, apparently many workers have to provide for the acquisition of special Green Care
competences on an *ad hoc* basis or just through learning by doing. There seems to exist a large demand for improved and well-organised and targeted education and training facilities in this area.

**References**
Conservation of healthy tree stock in the Vienna Hospital Association (KAV)

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At the area of all institutions of the Vienna Hospital Association there are approximately 14,500 trees.

**Conservation of a healthy tree stock is crucial for several reasons:**

- Green areas with their tree stocks are of enormous ecological (temperature regulating, air humidifying, wind breaking, noise reducing, binding CO₂ and producing O₂) and health-related significance.
- Pursuant to the Vienna Tree Protection Act, landowners are required to conserve the tree stock located on their land.
- Laws, Austrian standards (ÖNORMEN), and directives regulate the monitoring of traffic safety of trees (owners are liable for damages caused by fallen trees).

For the uniform, constant and careful procedure of tree stock inspection a pilot project - planned over a period of two years - was realized in all institutions of the Vienna Hospital Association.

Since January 2006 a central tree protection coordinator has carried out the duties of preventive tree protection like:

- Administering obligatory annual tree inspections
- Mapping trees in all institutions by a tree cadastre
- Centralized evaluation of bids for measures of tree protection and tree maintenance by external companies

By regular inspection of the tree stock damages are identified at an early stage and remedial measures can be taken. Further damage can be prevented, thus saving the tree from dying.

When old trees must be cut down, the replant of trees should be done at an early stage.
Farm and forest therapy

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Plans and actions for better health in Norway claim improved possibilities for increased physiological activity in general and more specific actions towards patients with defined needs in special. The plan Prescription for a Healthier Norway is focusing on: Active leisure time, active daily life, Active environments, activity/ability, together for physical activity, better understanding and communication. Relations in existence, meaningfull activity, focus on resources, social fellowship, green care and culture are keywords for green therapy.


Green Care Farming and Forestry is a multiprofessional challenge, has a tremendous potential and needs scilled hosts. Important elements are animal care and horticultural and forestry practice/activities. The general efforts in using forests and nature in green care are:

- Increased physical activity and wellbeeing
- Increased mentally health
- Developing the senses
- improved coping, initiative and creativity
- increased knowledge about trees, plants and wildlife
- Create relations to nature and outdoor-life
- Improved possibilities for general working training
- Adapted practical outdoor working within silviculture and forest management
- Practical work with tools, maschines and equipment for processing wooden materials

The Norwegian Forest Society has this vision:

All human beeings shall exprience forests as a meaningful source for quality of life.

The organization spreads knowledge about trees, nature and forestry to the public in general and the schools in special. The main objective is to focus upon the forests as a value-producer, environment improver, climate regulator, energysource, area for avtivity and learning, resource for improved health and continuing traditions. Human health and forests are given special priority at present to contribute to better health also through Green Care Farming and Forestry.
Group gardening in mental health care

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Background

Mental health problems are common in Finland: 20% of Finnish have mental disorders and 5-6% of the population suffers from severe depression. (KTL, 2006). Horticultural activities have been utilized in mental health care for long time, but the studies concerning to the effects of therapeutic gardening are quite scarce.

However, in recent years, several studies have demonstrated that by gardening activities several therapeutic goals, such as improvement in interaction level, communication skills and in self-esteem, can be achieved. Active involvement in growing and nurturing plants enhances knowledge and skills as well as social interaction. Improved self-esteem and self respect in turn results in recovery and acceptance in patients’ immediate surroundings. Horticultural activities are suggested to reduce stress and agitation and increase sense of purpose and social support (Sellers, 2001; Son et. al., 2004; Szofran & Meyer, 2004). In Pitkäniemi hospital in Finland mental patients reported that gardening activities enhanced their recovery and ability to work and reduced their sense of loneliness. Their mood also was improved (Talkkari, 2005).

Gardening as an activity can produce aesthetic, spiritual and psychological benefits. Urban plot gardeners in Helsinki told that a possibility for relaxation and physical activity outdoors were the most important reasons for their hobby. An opportunity to keep up horticultural skills was more important reason to rent a garden plot than economical benefits, such as food production (Parikka 1995; Dunnett & Qasim 2000).

Aims

The aim of this pilot study was to evaluate the suitability and effectiveness of group gardening as an aid to recovery among people having mental disorders.

Methods

Annala manor is located in the city of Helsinki, Finland. It is a public park with several rentable 100 m² outdoor garden plots for hobby gardeners. The Association for mental health has a plot for its members to carry out group gardening. The group meets once a week during the summer months.

The study was conducted in summer 2006 among out patients and their voluntary support persons participating in the gardening group. There were altogether 17 meetings during the summer in Annala with gardening group members and researchers. There was a camera available in the meetings.

In the beginning of the study participants received a diary to make notes about their experiences related to plot activities. At the end of the season they received a 59-item questionnaire. In autumn two patients and two support persons returned their diaries. Ten participants returned the questionnaire; five of them were patients and five support persons. The age range was 41 to 64 years. Four of the patients were female and one was male. All support persons were female. Participants took altogether 78 photographs during the meetings.

The researchers took part in all activities and conversation relating to the garden plot. They also took photographs and kept personal diaries. The researchers did not have knowledge of the patients’ psychiatric diagnosis, medication or therapy interventions.
Poster presentations

Results
In summer 2006 altogether 10-15 people took part in gardening group meetings in Annala. Only one out patient met regularly her own support person in the gardening meetings. During the summer all participants took part in gardening activities such as planting, weeding and watering. In their opinion the size of the group was convenient. Majority of the participants felt that they fit well in the group and everybody become acquainted with others.

Majority of the participants told that they have learned new things and they have had possibilities to self-expression. In the end of summer the participants estimated their health condition: two of ten (1 out patient and 1 support person) considered that it was very good, five of ten (3 out patients and 2 support persons) felt that it was good and two felt it was moderate (1 out patient and 1 support person).

The social support of the group and the approving atmosphere during the meetings contributed to autonomy and coping resources of patients. Freedom to choose which activity to participate in was appreciated. Working on the plot gave participants the feeling of being needed. During the summer steady improvement in the initiative of two patients was found from the diary notes of researchers.

Subjective experiences of taking part in group gardening
Visiting the garden plot clearly affected the participants. After visiting the garden plot the out patients reported to feel calmer and their ability to concentrate was improved. They also felt themselves recovered and more cheerful. Five of ten participants slept better in the night after visiting the plot.

Self-rated importance of group gardening
Being outdoors and fresh air were important to all participants as well as seeing beautiful flowers and smelling good scents of nature. For all support persons it was important to meet other group members and to chat with them. They also valued highly useful work and working with other people. Working with plants, seeing plants to grow and harvesting were appreciated among those group members, who visited the plot most regularly.

Conclusions
According to the results of this pilot study group gardening has potential in mental health care. It offers therapeutic outcomes in everyday context without emphasizing mental disorders and promotes equality among people.

References
Therapeutic and Sensory Garden at the RehaClinic Zurzach (2006 – 2009) Switzerland

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Main objectives
• Develop horticultural therapy in the sphere of rehabilitation
• Examine the effectiveness of horticultural therapy and evaluate it based on scientific methods
• Establish horticultural therapy at the RehaClinic Zurzach

Methods
The social-scientific objectives are pursued using qualitative social-scientific methods, and the medical objectives using quantitative procedures. This use of a wide range of methods aims to ensure that the results overlap each other and are also firmly backed up scientifically.

Examination of medical objectives by means of quantitative impact analysis

Determination of the target groups:
- Central-neurological patients after first stroke (CVI)
- Patients with chronic pain syndromes, such as back pain (cLBP) or fibromyalgia (FM)

Study design:
- Prospective intervention study (pre-post design):

Measuring points:
- CVI: Beginning and end of the stationary rehabilitation (after 8-12 weeks)
- Pain patients: Beginning and end of the stationary rehabilitation (after 4 weeks)
- Determination of quantifiable, comparable data for both patient groups (patients with horticultural therapy, control group)

Objective of the impact analysis:
- The results (effect sizes and variance of data) of this pilot study form the basis for the calculation of the statistical power of a subsequent, randomised controlled trial (RCT).

Results
• Comprehensive final report, including an analysis and evaluation of the qualitative and quantitative effects
• Concept for horticultural therapy in the sphere of rehabilitation comprising horticultural and medical standardised therapeutic units
• Garden maintenance concept for the new garden
• Handbook on the “Conception and construction of therapeutic gardens for rehabilitation clinics”
• Training concept for horticultural therapy in the sphere of rehabilitation
Green Learnscapes: Community Gardens and Intercultural Gardens in Berlin

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Community Gardens in New York, green on roof-tops in Tokyo, school gardens supplying food in Senegal or Intercultural Gardens in Germany – community-based gardens are gaining importance worldwide.

In Germany over 100 Intercultural Gardens exist, aside from a number of Community Gardens. These projects demonstrate new intercultural spaces – they are not only places for gardening together, but also assume important duties and responsibilities in the everyday-life of their gardeners. The idea of the Intercultural Gardens is that people with different origins are able to share a place and manage their allotments. The gardeners not only deal and work with their garden and its flowers, plants and vegetables, they can also congregate to get together, relax or celebrate in the garden. All these actions and interactions within their surroundings and community are accompanied by social processes.

Community Gardens have a positive effect on the gardeners themselves, the community and the surrounding neighbourhood and also on the gardening community itself. For the participating migrants, who often live in cramped conditions, it is an expansion of their habitat and through their work with the earth it is figuratively a way to ground themselves in their new homes. The created space is seen as a green oasis of well-being. However, it is not a private place as it is shared with other people who work together and enjoy the common space. The Community Gardens give a good example of building communities. As Moorehead (2006) points out, they are incubators for social capital, they create bridges and bonds within and outside of communities and facilitate civic participation on multiple levels.

Through local participation the gardeners acquire knowledge on different levels. It is not only that they learn about typical horticultural know-how, but in particular they learn in and through the social environment of the gardens. Voluntariness, sociability but also responsibility for the reclaimed land and space and the community are structural terms and conditions for these informal learnscapes. Against this background the participants emphasise their skills not only in garden-typical fields, but also gain and encourage social skills. It is a collective learning: they learn with and from their gardenmate. Additionally, they practise or make their initial steps in the german language.

Community Gardens and Intercultural Gardens nurture individual and collective empowerment and local participation. They can be seen as an effective example for an efficient living together according to a natural cycle of a good and common life. This potential is also seen by the Berlin Town Council. Along with the realisation of the agenda21 process, the quite new phenomenon of Intercultural Gardens has been noticed so that in the future all twelve of the districts in Berlin, urban and collective gardens should develop.

This paper is part of a work in progress.

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URL: http://www.stiftung-interkultur.de
Social enterprise, Farms and Care in Rural England

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Agricultural England
There are many definitions, both unofficial and official, that can be used to identify rural England. The dominant role of agriculture in determining the character of the English landscape, and the intuitive recognition that farming is the signature occupation of the countryside, justifies a separate consideration of those areas where farmland per head of local population is most significant. An illustrative map indicates the localities which comprise Agricultural England on this basis. This area contains more than half the country’s farmland and accounts for more than half of all cereals, vegetables, horticulture, meat, dairy and other livestock products. The population of Agricultural England equates to the population of London (a particularly dominating capital city: much larger than the next six largest English cities put together). The countryside has a disproportionately large share of skilled tradespeople and of the self-employed (even when farmers are taken out of the account). The countryside contains only a relatively small proportion of those who have been unemployed for a long time or who have never worked.

Age in the Countryside
Whilst the Metro-urban areas and elsewhere differ only slightly from the overall English pattern, London and the countryside present complementary variations in population structure. Younger adults (16-44 years of age) are a relatively lower fraction of people resident in the countryside and a relatively higher fraction of those living in London. Balancing this, older adults (over 45 years of age) represent a relatively higher fraction of the population resident in the countryside and a relatively lower fraction of those living in London. There seems to be a balancing life-cycle pattern in which younger people migrate from the countryside into London just as older people reverse the process. London’s population structure is not very like that anywhere else in England; whereas the countryside’s population structure is generally more like that everywhere other than London. Concentrating on the retirement age population (those over 64) shows the most marked differences: London with a smaller proportion than England as a whole; the countryside with a greater proportion; the Metro-urban areas and elsewhere reflect the national average. It does not seem self-evident that the scale of the difference in local retired populations on a proportionate basis is sufficient to justify alarm about demographic developments in rural England particularly.

Long-Term Illness and the General State of Health
There are numerous problems associated with the interpretation of statistics reporting self-evaluation of states of health. However, it is interesting to note that the fraction of the population reporting good health is lowest in the Metro-urban areas whilst the fraction not in good health is highest there. The incidence of long-term illness, sufficient to appreciably limit everyday activities or employment opportunities, equates to one-in-five of the population all across England (with the proportion being slightly higher in the Metro-urban areas). This is a substantial group within every local community.

The Prevalence of Care
Because a substantial proportion of the population is living with a limiting long-term illness, health problem or disability which limits daily activities or work, it comes as no surprise that provision of informal or unpaid care is widespread across all localities and amongst those engaged in all sorts of occupations. One in ten of the population is involved. It is a responsibility especially undertaken by the middle-aged, who may find themselves caring both for the next and for the previous generation. One in five of those aged 50-64 devote part of their lives to it. There is very little observable difference in the composition of the informal care-force between different localities. The majority are
women (60%). A sizable group of those providing care do so in addition to looking after home and family.

**Age, Health, Farms and Social Enterprise**

The most striking characterisation of the countryside is that it constitutes a relatively prosperous residential environment, albeit a relatively sparsely populated one. Households in rural areas and in London deploy levels of spending substantially greater than those of households in the Metro-urban centres or in the rest of the country. In these circumstances it can be expected that effective demand for non-standard, niche or premium care services will express itself especially strongly in the countryside. In parallel with this, since there are irreducible distance-related costs of public service provision in rural localities, there will be an incentive for local authorities to avoid direct delivery of (standard) care. Because farmers are a significant fraction of rural entrepreneurs (25% in Agricultural England), and because the introduction of the Single Farm Payment has heightened their sensitivity to the environmental amenity value of farming, it should be no surprise that farm-based care-providing businesses are emerging. The small scale of such enterprises is conducive to customisation and innovation in working practices. Private enterprises that fulfil a social purpose such as care provision will particularly benefit from encouragement in rural areas. The rehabilitative qualities of the rural environment and working on farms are being recognised by those people involved in commissioning. A brokerage role which aggregates individual suppliers to match the requirements of public sector commissioning is a platform for successful social enterprise. The National Care Farming Initiative is a nascent model of such collaborative engagement involving purchasers and providers of care services on farms.

**Sources of Evidence**


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