

Health and Well-being

Trees, Woodlands and Natural Spaces



Paul Tabbush and Liz O'Brien
Forest Research



Llywodraeth Cynulliad Cymru
Welsh Assembly Government

A photograph of a family walking on a dirt path in a wooded area. A man in a white t-shirt and dark shorts carries a young child on his shoulders. The child is wearing a white bucket hat and a red patterned shirt. The man is holding a pair of sneakers. A woman in a pink patterned sleeveless top and a dark patterned skirt walks to the right. A young boy in a pink shirt and a white bucket hat walks between the man and the woman. The background is filled with lush green trees and foliage. The image is overlaid with a semi-transparent dark green band containing the title and authors' names.

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Outcomes from expert consultations held in England,
Scotland and Wales during 2002

Paul Tabbush and Liz O'Brien

Social Research Unit

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Back cover: Cycling in Blackwater, New Forest; adventurous play at Moors Valley Wood, New Forest; families enjoying the walking trail at Bolderwood, New Forest [Forest Life Picture Library].

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Foreword

I am pleased to write a foreword for this thought-provoking publication which summarises the outcomes from three consultation days held during 2002 in England, Scotland and Wales. My involvement in the consultation day in Wales last September was a valuable opportunity to reflect on the wide-ranging links between trees, woodland and natural spaces and the environmental, economic and social aspects of our lives. Congratulations and thanks are due to the Forestry Commission for their initiative in setting up the events and providing the framework for a stimulating and timely discussion.

The major focus of the consultation days was the relationship between forests and health and well-being. There has been increasing recognition in recent years of the importance of physical activity in promoting health and reducing the risk of illnesses such as coronary heart disease, diabetes and osteoporosis. Forests and other natural spaces can play a key role here in providing opportunities for walking, cycling and conservation activities such as 'Green Gyms'. The potential benefits of forest-based activities in terms of promoting mental well-being and reducing stress were also considered to be important by participants.

Some of the key themes emerging from the consultation events include: a recognition of the role that leisure environments can play in promoting health and well-being; an emphasis on the importance of social inclusion and community engagement; and an affirmation of the need for organisations to work in partnership. The consultations also highlighted the need for a more integrated approach to achieving policy outcomes. I welcome this recommendation, as it is a theme which was also addressed in the recent Welsh Assembly Government consultation document: *Well Being in Wales*. It is important that impact on health is taken into account across the range of policy development and implementation. This approach signals the way forward in our efforts to create a healthier population by addressing the wider determinants of health.

The consultation days featured presentations describing the exciting projects that are already taking place around the UK, and there are many examples here of innovative approaches and good practice which we can share and learn from. There are also suggestions for new avenues to be explored. This publication is an important contribution to our thinking about the links between forestry and health, and deserves to be widely read.

Dr Ruth Hall
Chief Medical Officer
Welsh Assembly Government

Executive summary

This publication provides presentation synopses and workshop discussions from three expert consultations held on *Health and Well-being: Trees, Woodlands and Natural Spaces* during 2002. The consultations took place in Dumfries on 19 June, London on 4 July and Cardiff on 16 September. The Forestry Commission, with its agency Forest Enterprise, represents the UK's largest single controller of public land. At the same time, community forests are being developed in and around towns and cities, in recognition of the benefits of such initiatives in building social capacity, as well as to provide much needed naturalistic public space. With the ever-increasing emphasis on the relationship between healthy lifestyles, access to natural space and expenditure on curative medicine, the opportunity to develop the use of forests and woodlands as healthy living centres should be embraced.

Forest Research, the research agency of the Forestry Commission, organised the expert consultations with the aim of bringing together a diverse range of researchers, policymakers and practitioners interested in trees, woodlands and their impacts on public health. The consultations provided a forum for a variety of organisations to:

- Discuss and examine the relationships between the environment, health, culture and society.
- Develop communication networks of environmental and health professionals, administrators and researchers.
- Build mutual understanding among these target groups.
- Explore the need to establish medium- to long-term partnerships to develop joint research and pilot projects.

Presentations in the morning of each consultation, which provided a context for linking health and the environment, were followed by four workshops in which participants discussed the main themes of policy, practice, promotion and research.

Taken together, the three consultation events identified the following major recommendations from each of the workshops.

Policy workshops

- Take health into account in any policies affecting places where people live and the associated natural spaces, possibly through Health Impact Assessments.
- Encourage integrated partnerships that bring together physical, mental and social health.
- Consider establishing a lead agency to integrate with or link the many policies and plans concerned with public health and the environment.
- Establish inclusive policies that make it easier for excluded groups to get involved.
- Engage with local communities in developing local access policies.
- Integrate green space with living space through spatial planning.

Practice workshops

- Encourage a variety of activities, e.g. healthy walking schemes.
- Increase the sense of security experienced in accessible space, through wardening, physical design and CCTV where required (e.g. in car parks).
- Establish major regional demonstration projects to promote health through environmental access, to include provision for monitoring and evaluation.
- Identify woodlands locally accessible to schools and involve schools in using them.
- Encourage sports co-ordinators in secondary schools to include access to green space as a normal school activity.
- Improve the quality of school grounds.

Research workshops

- Include an element for monitoring and evaluation in project proposals.
- Consider designating a centre for research into the relationship between health and the environment.
- Include provision for dissemination of the results in any research funding.
- Co-ordinate research projects and provide baseline data of previous research.
- Generate community empowerment by involving communities in participatory research.
- Carry out research on currently excluded groups: Why are they excluded? How can they be included?
- Effectively use both qualitative and quantitative indicators to assess health and well-being, show progress and build a much needed evidence base.

Promotion workshops

- Ensure high-quality management of accessible areas, to include welcoming design and well-maintained signage.
- Promote the countryside in an attractive way, focusing on what people want.
- Improve public information on accessible green space.
- Promote and organise health activities appropriate to different sections of the population: to be undertaken by forest health workers.
- Ensure any lead agency would effectively promote uses of woodlands for health and well-being through, for example, the arts and schools.
- Choose a variety of messages; promoting an upbeat message focusing solely on health may discourage some people.

Since the three expert consultations took place, consideration has been given to the development of a number of projects such as healthy walking schemes and initiatives which demonstrate the benefits of using green space. A focus group of health professionals who attended the English event met to discuss in more detail woodlands for health and well-being. Ideas are also being produced for a possible European COST (European Co-operation in the Field of Scientific and Technical Research) action proposal on forests, trees and health that would involve a partnership of organisations from various European countries.

Welsh Foreword: Rhagair

Roeddwn yn falch i ysgrifennu'r rhagair ar gyfer y cyhoeddiad ysgogol hwn sy'n crynhoi canlyniadau tri diwrnod ymgynghorol a gynhaliwyd yn ystod 2002 yng Nghymru, Lloegr a'r Alban. Bûm yn cymryd rhan yn y diwrnod ymgynghori yng Nghymru fis Medi diwethaf, ac roedd hyn yn gyfle gwerthfawr i mi i feddwl am y cysylltiadau eang rhwng coed, coetiroedd a llecynnau naturiol ac agweddau amgylcheddol, economaidd a chymdeithasol ar ein bywydau. Rhaid llongyfarch a diolch i'r Comisiwn Coedwigaeth am drefnu'r digwyddiadau hyn ac am ddarparu'r fframwaith ar gyfer trafodaeth ddiddorol ac amserol.

Roedd y dyddiau ymgynghori yn canolbwyntio'n bennaf ar y berthynas rhwng coedwigoedd a iechyd a lles pobl. Yn y blynyddoedd diwethaf mae pobl wedi dod i sylweddoli fwyfwy pa mor bwysig yw gweithgareddau corfforol o ran cadw'n iach a lleihau'r perygl o afiechydon megis clefyd y galon, clefyd siwgr ac osteoporosis. Gall coedwigoedd a mannau naturiol eraill chwarae rôl allweddol yma drwy ddarparu cyfleoedd ar gyfer cerdded, beicio a gweithgareddau cadwraethol megis 'Campfeydd Gwyrdd'. Credai'r cyfranogwyr hefyd y gallai gweithgareddau coedwig chwarae rhan bwysig mewn hybu iechyd meddwl a lleihau pwysau gwaith.

Dyma rai o'r prif themâu sy'n deillio o'r digwyddiadau ymgynghori: cydnabod rôl amgylcheddau hamdden o ran hyrwyddo iechyd a lles; pwysleisio pwysigrwydd hybu cymdeithas gynhwysol ac ymwneud cymunedol; cadarnhau'r angen i sefydliadau weithio mewn partneriaeth. Hefyd, bu'r ymgynghoriad yn trafod yr angen am ymagwedd fwy integredig at gyflawni nodau polisi. Rwyf yn croesawu'r argymhelliad hwn, gan i'r un thema gael cryn sylw yn nogfen ymgynghori Llywodraeth Cynulliad Cymru *Lles yng Nghymru*. Mae'n bwysig ein bod yn ystyried yr effaith ar iechyd wrth ddatblygu a gweithredu ein holl bolisiau. Mae'r ymagwedd hon yn dangos y ffordd ymlaen yn ein hymdrechion i greu poblogaeth iachach drwy fynd i'r afael â'r ffactorau ehangach sy'n effeithio ar iechyd.

Roedd y dyddiau ymgynghori hefyd yn cynnwys cyflwyniadau yn disgrifio'r prosiectau cyffrous sydd eisoes ar y gweill drwy'r DU, a cheir nifer o enghreifftiau yma o gynlluniau dyfeisgar ac arferion da y gallwn eu rhannu a dysgu oddi wrthynt. Ceir argymhellion hefyd ynghylch agweddau newydd y dylid eu hystyried. Mae'r cyhoeddiad hwn yn gyfraniad pwysig i'r ffordd yr ydym yn meddwl am y cysylltiadau rhwng coedwigaeth a iechyd, ac y mae'n haeddu cael ei ddarllen yn eang.

Dr Ruth Hall
Prif Swyddog Meddygol
Llywodraeth Cynulliad Cymru

Welsh Executive summary: Crynodeb Gweithredol

Mae'r cyhoeddiad hwn yn cynnwys crynodeb o'r cyflwyniadau a'r trafodaethau gweithdy o dri ymgynghoriad arbenigo a gynhaliwyd ar *Iechyd a Lles: Coed, Coetiroedd a Llecynau Naturiol* yn ystod 2002. Cynhaliwyd yr ymgynghoriadau hyn yn Dumfries ar 19 Mehefin, yn Llundain ar 4 Gorffennaf, ac yng Nghaerdydd ar 16 Medi. Y Comisiwn Coedwigaeth, a'i asiantaeth Menter Coedwigaeth, yw'r rheolwr tiroedd cyhoeddus mwyaf yn y DU. Ar yr un pryd, mae coedwigoedd cymunedol yn cael eu datblygu o gwmpas trefi a dinasoedd oherwydd manteision cymdeithasol cynlluniau o'r fath ac er mwyn darparu mannau cyhoeddus naturiol mawr eu hangen. Oherwydd y sylw cynyddol sy'n cael ei roi i'r berthynas rhwng dulliau byw iach, mynediad i fannau naturiol a gwariant ar wasanaethau meddygol, dylid manteisio ar bob cyfle posibl i ddatblygu'r defnydd o goedwigoedd a choetiroedd fel canolfannau byw'n iach.

Trefnwyd yr ymgynghoriadau arbenigol hyn gan Ymchwil Coedwigaeth, asiantaeth ymchwil y Comisiwn Coedwigaeth, er mwyn dwyn ynghyd amrywiaeth eang o ymchwilwyr, llunwyr polisi ac ymarferwyr sydd â diddordeb mewn coed a choetiroedd a'r effaith a gânt ar iechyd y cyhoedd. Bu'r trafodaethau hyn yn llwyfan i nifer o sefydliadau i:

- Drafod ac archwilio'r berthynas rhwng yr amgylchedd, iechyd, diwylliant a chymdeithas.
- Datblygu rhwydweithiau cyfathrebu o staff proffesiynol, gweinyddwyr ac ymchwilwyr sy'n gweithio ym maes yr amgylchedd ac iechyd.
- Meithrin cyd-ddealltwriaeth ymhlith y grwpiau targed hyn.
- Ystyried yr angen i sefydlu partneriaethau tymor canolig a thymor hir er mwyn datblygu cyd-brosiectau ymchwil a pheilot.

Yn ystod y bore, cafwyd cyflwyniad i bob ymgynghoriad, i osod cyd-destun ar gyfer cysylltu iechyd a'r amgylchedd, a chafwyd pedwar gweithdy i ddilyn lle bu'r aelodau yn trafod y prif themâu, sef polisi, ymarfer, hyrwyddo ac ymchwil.

Mae'r prif argymhellion canlynol yn deillio o'r gweithdai a gafwyd wedi'r tri ymgynghoriad.

Gweithdai polisi

- Rhoi ystyriaeth i iechyd mewn unrhyw bolisiâu sy'n effeithio ar ble mae pobl yn byw a'r llecynau naturiol cysylltiedig, a hynny o bosibl drwy gynnal Asesiadau Effaith ar Iechyd.
- Annog partneriaethau integredig sy'n dod ag iechyd corfforol, meddyliol a chymdeithasol at ei gilydd.
- Ystyried sefydlu asiantaeth arweiniol i integreiddio neu gysylltu'r polisiâu a chynlluniau niferus sy'n ymwneud ag iechyd y cyhoedd a'r amgylchedd.
- Sefydlu polisiâu cynhwysol a fydd yn ei gwneud yn haws i grwpiau sydd wedi eu hallgau i gymryd rhan.
- Ymgynghori â chymunedau lleol i ddatblygu polisiâu ar fynediad lleol.
- Integreiddio lleoedd gwyrdd â lleoedd byw drwy gynllunio gofodol.

Gweithdai ymarfer

- Annog amrywiaeth o weithgareddau, e.e. cynlluniau cerdded iach.
- Cynyddu'r ymdeimlad o ddiogelwch mewn mannau sy'n hygyrch i'r cyhoedd, drwy gyfrwng wardeiniaid, dulliau cynllunio, a theledu cylch cyfyng lle bo angen (er enghraifft, mewn meysydd parcio).
- Sefydlu prif brosiectau arddangos rhanbarthol i hyrwyddo iechyd drwy fynediad amgylcheddol, gan gynnwys darpariaeth ar gyfer monitro a gwerthuso.
- Rhestru coetiroedd lleol sy'n hygyrch i ysgolion, a chael ysgolion i'w defnyddio.
- Annog cydlynwyr chwaraeon mewn ysgolion uwchradd i gynnwys defnyddio mannau gwyrdd yng ngweithgareddau chwaraeon arferol yr ysgol.
- Gwella ansawdd tiroedd ysgolion.

Gweithdai ymchwil

- Cynnwys elfen ar gyfer monitro a gwerthuso mewn cynigion ar gyfer prosiectau.
- Ystyried dynodi canolfan ar gyfer ymchwilio i'r berthynas rhwng iechyd a'r amgylchedd.
- Cynnwys darpariaeth ar gyfer lledaenu canlyniadau mewn unrhyw arian ymchwil.
- Cydlynw prosiectau ymchwil a darparu data man cychwyn o ymchwil flaenorol.
- Rhoi grym i gymunedau drwy eu cynnwys mewn gwaith ymchwil.
- Gwneud gwaith ymchwil i grwpiau sydd wedi eu hallgau: Pam y maent wedi'u hallgau? Sut y gellir eu cynnwys?
- Gwneud defnydd effeithiol o ddangosyddion ansoddol a meintiol i asesu iechyd a lles, i ddangos cynnydd, ac i greu corff o dystiolaeth mawr ei angen.

Gweithdai hyrwyddo

- Sicrhau bod mannau sy'n hygyrch i'r cyhoedd yn cael eu rheoli'n effeithiol, gan gynnwys cynllunio deniadol a chadw arwyddion mewn cyflwr da.
- Hyrwyddo cefn gwlad mewn ffordd ddeniadol, gan ganolbwyntio ar yr hyn y mae pobl ei eisiau.
- Gwella gwybodaeth i'r cyhoedd am leoedd gwyrdd hygyrch.
- Hyrwyddo a threfnu gweithgareddau iechyd sy'n addas ar gyfer gwahanol rannau o'r boblogaeth: y gwaith hwn i'w wneud gan weithwyr iechyd coedwigaeth.
- Sicrhau y bydd unrhyw asiantaeth arweiniol yn hyrwyddo'n effeithiol y defnydd o goetiroedd ar gyfer iechyd a lles, er enghraifft, drwy gyfrwng y celfyddydau ac ysgolion.
- Dewis amrywiaeth o negeseuon; gall hyrwyddo neges galonogol sy'n canolbwyntio ar iechyd yn unig yrru rhai pobl i ffwrdd.

Ers cynnal y tri ymgynghoriad arbenigo buwyd yn ystyried y posibilrwydd o ddatblygu nifer o brosiectau megis cynlluniau cerdded iach a mentrau sydd yn cyfleu y buddion o ddefnyddio lleoedd gwyrdd. Cyfarfu grŵp ffocws o weithwyr iechyd proffesiynol a fynychodd y digwyddiad yn Lloegr i gael trafodaeth fwy manwl ar y cysylltiad rhwng coetiroedd ac iechyd a lles. Mae syniadau'n cael eu datblygu hefyd ar gyfer cynnig posibl mewn perthynas â choedwigoedd, coed ac iechyd o dan y cynllun COST (Cydweithrediad Ewropeaidd ym Maes Ymchwil Gwyddonol a Thechnegol) a fyddai'n cynnwys creu partneriaeth o sefydliadau o wahanol wledydd Ewropeaidd.

Introduction

In 2002 the Forestry Commission with Forest Research hosted three expert consultations, in Scotland, England and Wales, which brought together environmental and health professionals to explore opportunities for increasing public health and well-being. There is growing understanding in health policy that sustainable health requires not only effective medical approaches, but also healthy environments and healthy lifestyles. This is the idea of well-being: something more than just the absence of illness. Studies in North America and Europe have shown that forests can contribute by providing natural restorative spaces either near to where people live, in both rural and urban contexts, or as part of a rural recreation resource that can be easily accessed, for example by car or other transport (Ulrich, 1986; Robinson, 1992; Curtis *et al.*, 2002).

Inactivity is often a significant factor in many major illnesses: obesity, heart disease, kidney disease, some types of cancer and Type II diabetes. Active involvement of people in outdoor activities in forests and green areas therefore has direct significance for health. Forests and green areas provide a haven to escape to from stress. Contact with nature can extend a positive influence on the physical and mental health of human beings in increasingly urbanised societies. Hospitalised patients may recover faster if they can see trees (as opposed to buildings) from their window, while periods spent out of doors can have therapeutic value for patients and residents of hospitals and old people's homes. Our senses relax and are infused with fresh energy when we view and experience natural landscapes which include trees and other vegetation. The study by Hartig *et al.* (1996) of environmental influences on psychological restoration, through two laboratory experiments, also underlines the importance of restorative environments, such as woodlands, as an antidote to stress.

Woodlands also offer a locus for community action, a meeting place and a venue that often forms an important aspect of local identity. Schemes which exploit trees and woodlands to promote social cohesion through common interest in outdoor activity, conservation work and plans for local environmental improvement also have positive effects on physical, mental and social health (Burne, 2001; Burns *et al.*, 2002).

In June 2002, an alliance of United States (US) departments of government signed a Memorandum of Understanding called 'To Promote Health and Recreation' (National Centre for Chronic Disease Prevention and Health Promotion, 2002). Signatories were: Department of Health and Human Services (Public Health); Department of Agriculture (Forest Service); Department of the Interior (National Parks, Fish and Wildlife Service), and the Army. The US concept 'Active Community Environments' seems to concentrate on encouraging physical activity in an increasingly sedentary population. We would now recognise health benefits of contact with natural environments that go well beyond those derived simply from physical exercise.

Questions that prompted the Forestry Commission to hold the three consultations include:

- What are the links between our environment and the way we live?
- What are the links between the way we live and our health and well-being?
- What can environmental management contribute to a world in which spending on health care is increasingly difficult to control?



Children in Littlewood (Liverpool) involved in a community woodland event which included cleaning up the woodland, face painting and roasting chestnuts.



Health and well-being: social, psychological, physical and environmental influences

First we must distinguish between the two concepts of health and well-being. Health (as in the 'National Health Service') often means the absence of illness. Health professionals recognise a 'medical model', in which patients present with illness, which is then corrected by experts using drugs or surgery, but sometimes without close attention paid to a person's complex social environment or the social causes of illness. It is this model which is at the root of spiralling costs. Science has undoubtedly been successful in increasing life spans, and in discovering new and more elaborate drugs and procedures to counter illness. It is hard to argue that a drug is too expensive, even if it only gives a small chance of improvement in the condition of a fellow human being.

Wilson (1976:1) explained that our Health Service in the past has tended to focus on sickness rather than health: 'In Great Britain our understanding of health is based on our knowledge of illness. We have the curious situation that the professions concerned with health (led by doctors) are primarily interested in disease. The institutions of the Health Service (particularly General Teaching Hospitals where new members of the professions are trained) are founded upon the same idea – that health is obtained by getting rid of disease.' In recent years this focus has evolved into a more holistic view which recognises the many psychological, social, physical and environmental influences on health.

In his talk to the London Green Space Conference on 1 February 2002, William Bird drew attention to the relative cost-effectiveness of physical activity compared with standard medical treatment. For example, medical treatment of one individual to prevent heart attack would include treatment to reduce blood pressure (£19 per month) and to reduce cholesterol (£30 per month), costing £14 635 over 5 years. On the other hand, relatively inexpensive and enjoyable physical activity can be expected to reduce the risks of heart attack, stroke and diabetes (by 50%), and colon and breast cancer (by 30%). A welcome innovation has been the 'Green Gym' idea promoted by the British Trust for Conservation Volunteers, providing aerobic exercise in the course of practical conservation work. Similarly, 'Walking the Way to Health' is a Countryside Agency/British Heart Foundation scheme to promote health and fitness through countryside access.

However, well-being is not just about physical fitness, it has a spiritual, psychological, cultural side as well. The concept of well-being goes much further, including ideas like happiness, optimism, self-expression, self-esteem, quality of life, realising one's potential, personal satisfaction with life and fitness to enjoy the freedom of outdoor exploration, for example. O'Brien's (2003) study of the values and meanings people associate with woodlands and trees in England emphasises people's subjective feelings of well-being when in woodlands and parks. As one of the study respondents (from Liverpool) described it: 'For me it's the chance to get out and relax and not be in the middle of a concrete jungle. Just the pace of life is slower, if you like, you can just go out in a wooded area or a park and suddenly you don't have to hurry anymore.'

Respite and recovery from stress

According to Karen Henwood, author of a report to the Forestry Commission (Henwood, 2001: 50): 'The experience and effects of chronic stress is one of the blights of modern life' (there are approximately one million users of 'Prozac' in the United Kingdom). There is a body of research evidence on the likely benefits to psychological well-being (and hence to health) when people are able to experience respite or recovery from stress.

Research has identified contact with, or visual appreciation of, natural scenes as providing a means to stress recovery. Ulrich's (1986) paper describes research findings which concern responses of humans to natural and urban visual landscapes. The majority of research in this area has centred on verbalised aesthetic preferences while fewer studies have focused on physiological influences of landscapes on humans. Evidence from research suggests that people feel more relaxed when viewing trees and other plants and water compared to urban settings. This coincides with the nature restoration hypothesis in which natural views (as opposed to urban/built environment views) are considered to be of therapeutic benefit. This

hypothesis was exemplified in Ulrich's important study on the faster recovery of hospitalised patients when viewing trees from their windows. Ulrich relates this to possible large financial savings that could be made if hospitals were designed with consideration given to the therapeutic benefits of nature. Research with a diverse range of adult groups has also shown that trees and other vegetation improve people's liking of urban scenes, and Ulrich (1986: 26) suggests that 'the benefits of visual encounters with vegetation may be greatest for individuals experiencing stress or anxiety'.



Woodlands and green spaces can provide an escape from stress as well as being aesthetically attractive: scenic splendour of autumn colours in Tay.

At the National Urban Forestry Unit's conference: 'Green Space and Healthy Living' in Manchester in May 2002, Roger Ulrich described more recent research undertaken in Texas on stress recovery. He was able to measure a beneficial effect of just 3–5 minutes exposure to a 'natural' environment, using measures like tension in brow muscles, and 'family mood in the evening'. Exposure to natural scenes during post-operative convalescence reduced the convalescence time and the demand for painkilling drugs. Interestingly, he referred to strong evidence that the hormones associated with stress also suppress immune responses. A good deal of disease, therefore, may result from infections induced by social stress. An alternative to the 'medical model' is the 'exposure–resource model' (Siegrist, 2000). This model balances environmental stresses (toxins, noise, crowding, major life events and infective agents) against illness-deflecting and health-promoting resources. These resources derive from the physical, psychological and social environment of the individual. According to this model, an excess of exposure over resource results in disease.

Urban and rural landscapes

Rhode and Kendle (1994: 15) reviewed 'Human well-being, natural landscapes and wildlife in urban areas'. The report assesses in detail the literature surrounding the different aspects of contact with nature and well-being and relates this to emotional, cognitive, behavioural, developmental and social effects. They challenge the general assumption in western societies that cities are bad for people's health and well-being and argue that there is little evidence to suggest that 'city dwellers are more psychologically vulnerable or disturbed than persons who live in rural areas'.



The importance of trees and green space within the urban environment: Soho Square, London.

The Countryside Agency (2001) report on 'Better mental health from the countryside' describes how rural poverty and disadvantage can be masked by a picture of the countryside as some sort of rural idyll. This concept does not take into account the struggle that many farmers are facing to make a living, the high suicide rates of agricultural workers and the closure of many rural premises such as shops and pubs. Clark's (1997: 303) paper on health and poverty also describes 'the dominant discourse of rurality which emphasises the advantages of rural life, and presents positive images of rural community' which she suggests 'has created a powerful myth which masks increasing economic

divisions in rural communities'. The Countryside Agency (2001) report concludes that although there is evidence of the factors that promote mental health none of these are exclusively related to the countryside. On the other hand, it does go on to assert that introducing green space (countryside features) into urban areas improves mental health. Both of these reports challenge simplistic views that rural areas are good for health and well-being while urban areas are not. The complexity of how we actually feel with regards to our well-being and how this relates to the environment around us and our social networks are important areas for further research.

Therapeutic landscapes

Karen Henwood (2001) also identified major psychological benefits of natural space in giving a sense of place, because these spaces bear the marks of human use, and act as foci for communal activity. Put simply, the woods you scrambled through and had adventures in when young have particular value in triggering memories and promoting positive feelings in times of stress. The relationship between a healthy (ecologically sustainable) environment and human health is also part of human understanding of a desirable lifestyle; such a lifestyle is particularly valued, for instance in Scandinavian countries, where quality of life is characteristically given an importance apart from material wealth.

The review (Henwood, 2001) concluded that countryside agencies could make contributions to health in at least four areas:

- Physical activity
- Psychological well-being
- Social participation
- Ecologically sustainable lifestyles.

The countryside is a rich setting in terms of people's interests, desires and motivation for contact with and knowledge of their environment – both physical and social. Even if physical exercise is not the main reason for people's interest, this can be encouraged as an additional benefit of other leisure pursuits and interests. Encouraging people to take exercise as part of other activities they would usually undertake, e.g. walking as well as picnicking, and making it possible for them to do so easily, may provide health benefits that transcend inequalities in wealth and access to health care.

The influence of the movement to promote health through a whole range of psycho-social (rather than directly biological) interventions brings a range of issues that might not at first sight seem to be health-related to the centre of efforts to protect and promote health and healing. One is the value of social participation in publicly owned and hence shared green spaces, and another is the importance of the sensuous pleasures people can directly experience from contact with the natural world. Through the psycho-social routes to health and healing, each may be considered potentially health enhancing. Research on psychological therapy for people's experiences of emotional distress, which can also be concerned with people's sense of placelessness or rootlessness, offers further possibly relevant insights. What psychological benefits may be engendered through an enhanced 'sense of place'? Williams (1999: 3) emphasises the socio-ecological model of health 'which involves an interactive set of relationships between people and their social, cultural and physical environment'. The concept of therapeutic landscapes highlights the dynamic processes between what places mean to people, their significance in terms of memories and meanings and how that links to their feelings of wellness.

Addressing issues of immediate and long-term ecological sustainability is necessarily part of any discussion of health in the environmental arena. However, the issue of ecological risk is not one that is easily dealt with either as part of an environmental or a health policy agenda. At minimum, it may be necessary to find ways of communicating with the public about the complex findings from research, and about ways of adopting more sustainable lifestyles.

Adventure therapy

'Natural' environments can introduce an element of physical and mental challenge missing from urban life. At the expert consultation in Dumfries, Geoff Evans described the average school playground as 'like a prison yard' and advanced the benefits of 'adventure therapy' in restoring self-esteem. Low self-esteem and disenfranchisement are often at the root of the drugs/crime/deprivation/social exclusion culture which blights our society. Is it too fanciful to suggest that reintroduction of natural spaces might have a benefit here? Research on a Chicago housing development found that crime rates were lower in areas with greenery as opposed to areas of little or no greenery (Kuo and Sullivan, 2001). Of course, natural spaces are also among the few private spaces left where we are away from the gaze of closed-circuit television, so it is not difficult to get the impression that they are places to go for illicit activities, including drug-taking. This means that to maximise beneficial effects, green spaces have to be sympathetically designed and managed, although hopefully not sanitised. A study of inner city children in Chicago demonstrates the importance of trees in the urban landscape as a crucial outdoor feature where children can learn and practice a variety of skills and interact with other children (USDA Forest Service, 2001). The study suggests that in areas with trees, as opposed to barren areas, children played for longer and were involved in more creative and collaborative play.



Children tackle the climbing frame at Wendover Wood, Buckinghamshire.



Community activities such as tree planting, involving schools, are social occasions and an opportunity to learn and improve the local environment.

Woodlands as a setting for social activity

Settings such as woodlands allow for different types of social interactions through activities like recreation and picnicking. More (2002) argues that these are activities that strengthen social bonding and should be encouraged, not discouraged, in the development of future green space and forestry policy. The participation of communities in improving their own health and well-being is advocated by the New Economics Foundation in its report assessing public involvement and health projects across the UK (Burns *et al.*, 2002). One example from that report is 'The Healthy Village' project in Brockenhurst, Hampshire in which the local general practitioner started an exercise and activity prescription scheme. The village hall was turned into a health centre for the community and local businesses and colleges became involved. Often the social element of taking a walk with others is what keeps people involved on a long-term basis (Countryside Agency, 2000). The benefits of conservation work, for example tree planting, may go beyond the act itself, and on to generating people's interest in other community activities and

providing them with an opportunity to get to know others in their locality. Rhode and Kendle (1994: 151) suggested that 'nature areas therefore appear to be important not only objectively because of the beneficial social processes which they can evoke but because they are also seen to be so subjectively by the people who use them as social settings'.



Infrastructure: urban and rural

Woodlands need not necessarily be seen purely as part of the rural scene; they can be part of the space surrounding everyday life. The new Community Forests are particularly valuable in being sited close to where people live. To give an example, one of the authors is only able to cycle to work because the forest provides a cycle route which avoids the extremely dangerous main road. The ride is pleasant and away from choking exhaust fumes, so he is encouraged to take the bike rather than the car. Would more people benefit from opportunities like this if natural connecting routes were specifically designed for in creating and managing forests, and in planning environments in which people live and work? How can we make green spaces an integral part of people's lives so that they not only use them in their free time but also as natural choices for everyday transport routes? Sullivan and Kuo (1996) in their study of the role of trees in strengthening urban communities, argue that trees in the urban environment are not just amenities, but are an important part of the basic infrastructure of the city and should be given the same importance as electricity or sewers.



Making it happen

There is much work to be done in defining design criteria. The realisation of health benefits will depend on the design and location of accessible natural spaces, including parks, woodlands and forests. Farmland is not traditionally regarded as public space in Britain, although there is increasing emphasis on access to the countryside. The Forestry Commission, on the other hand, has long operated an open-access policy, and is the single controller of the largest area of accessible natural space. We need to establish how best to deliver health benefits, and what mechanisms and partnerships can be created to improve and establish healthy environments, especially for those people who have least access to them.



Families enjoy the walking trail at Bolderwood, New Forest. Positive mental, physical and social health effects can accrue from the use of woodlands to promote social cohesion through common interest in outdoor activities.



Consultation Presentations



Scotland

Opening address
Presentations



England

Opening address
Presentations



Wales

Keynote address
Presentations

At the consultations in each country, the morning was taken up with a series of presentations chosen to set the scene, and to stimulate ideas for the afternoon workshops. A brief description of each of these presentations is included in the order in which the consultations were held during 2002.



Opening address

David Howat *Conservator, Forestry Commission*

In his opening address David talked about the Scottish Forestry Strategy which emphasises the benefits of community activity. He described the potential for recognising the benefits of health and well-being in developing the community involvement aspects of the strategy. He outlined how recreation in forests could make a positive contribution to the health of Scottish communities. David described the existing Forest Enterprise resource in Scotland, emphasising that only 4% of that resource was in urban local authority areas. He argued that a priority for action was the need for a radical improvement in the quality and setting of green space in urban areas. The importance of working in partnership was discussed with strong emphasis made on strengthening existing partnerships and creating new ones, e.g. with health boards.



Key Scottish health issues

Dr Derek Cox *Director of Public Health for Dumfries and Galloway*

Derek listed both the good and bad direct effects of trees on health, for instance medicines derived from trees (aspirin, taxol) on the one hand, and asthma (from tree pollen) and poisoning (e.g. from yew foliage) on the other. Less direct effects included harmful fungi harboured by trees, and the potential of trees in the uptake of pollutants and the benefits for air quality. However perhaps the most significant effects come from impacts on the social environment – opportunities for exercise, meeting people, employment, and as a locus for community action. The ‘big three’ causes of premature death in Scotland, coronary heart disease, stroke and cancer, as well as respiratory disease, mental ill-health, poor children’s health, drugs and alcohol are all closely related to the social environment, and may be affected by its interaction with the physical environment.

The determinants of health include our social environment, physical environment and genetic endowment. Woodlands and natural spaces can provide opportunities to improve both our social and physical environment by providing a setting for social interactions, reducing pollution levels and acting as areas which promote and enable physical activity to take place. The National Health Service, though, is largely concerned with medicine: 99.7% of the health budget for Dumfries and Galloway is spent on illness, not on health.



Health, well-being and the environment – the general practice perspective

Professor David Hannay *General Practitioner in Newton Stewart, Director of Dumfries and Galloway Primary Care Research Network, and Visiting Professor at Crichton Campus*

David forcefully made the connection between health and employment, giving the example of Mary whose baby had recently been taken into care because she was a drug addict, as was her partner who was unemployed and recently out of prison. Mary’s father had also been unemployed. Forestry in Dumfries and Galloway, the most forested region of the UK, is important for social cohesion, employment and health. In a study David conducted in Glasgow, a clear link was found between mental health and unemployment, whether the unemployment was due to illness or not.

Economic changes in the 20th century, including large increases in the productivity of labour through mechanisation and changes in employment practices, have led to depopulation of the countryside and unemployment. There is also an in-migration of retired people leading to an ageing rural population. Wigtownshire now has the highest proportion of households in Scotland which suffer multiple deprivation, together with a high percentage of lone parents and unemployment among women. Dumfries and Galloway has seen a marked decline in full-time employment for men, and has the second highest suicide rate of any region in Scotland. Lack of steady jobs and low wages lead to poverty, which in turn leads to stress, isolation and low self-esteem which all affect health and well-being.



Outdoor education and personal development

Geoff Evans Outdoor Activity Centre, Mabie Forest

Geoff presented an inspiring first-hand account of the development of his centre and the positive effects that outdoor activities could bring about in highly deprived dysfunctional or disaffected young people. The main function was to give youngsters a better sense of control, and hence belief in themselves. Understanding that you can climb a tree or steer a canoe gives this sense of control. Geoff also made use of metaphor, for instance asking young people to find a piece of wood whose shape could help to represent their bad experience, and then burning it on the camp fire when they went camping. This resonates strongly with the idea of ‘therapeutic landscapes’ (Gesler, 1992, cited in Henwood, 2001), in which spaces are characterised not just in terms of physical or biological properties, but also in terms of cultural values, meanings and symbolism. Reflecting on the benefits derived by young people from contact with a natural environment, he described many school playgrounds as ‘like prison yards’.



Personal development: the positive effects that outdoor activities can have on young people.



Health, identity, place, space and woodlands

Professor Catherine Ward-Thompson Landscape Design and Research Unit,
Edinburgh College of Art

Catherine’s presentation outlined the results of research into local open space and social inclusion, using case studies in Central Scotland, carried out on behalf of the Forestry Commission. Through a series of focus groups and questionnaires the importance of forests for local people was explored

along with the characteristics which determine which forests people choose to use or abuse. Quotes from focus group respondents provided rich detailed descriptions of how people viewed and valued forests and trees.

The results point to some important findings with regard to:

- Qualities that define place.
- Central importance of childhood experience: adult perception and use of woodland is strongly linked to childhood experience.
- Woods often being described as threatening, more so for women than for men.
- Importance of woods near to where people live.
- Health benefits of visiting woodlands.
- Issues of social inclusion – unemployed men used woodlands as places they could go where they would not be defined as unemployed.



A woodland event in Liverpool uses cartoon characters to engage with children and provide a fun day out.



Opening address

Lord Clark of Windermere *Chairman of the Forestry Commission*

Lord Clark described the need to focus on what the Forestry Commission could offer to the British people. The Memorandum of Understanding produced in America, and mentioned in the Introduction (page 1), was something Lord Clark suggested we could learn from in this country. He also emphasised the importance of the Community Forests in England. The Forestry Commission has a current agreement with the Northwest Development Agency in which old industrial sites are being purchased and trees planted to provide community, recreation and conservation opportunities. The importance of being socially inclusive was outlined: how do we engage people in inner cities and deprived areas? The appointment of a Forestry Commission Conservator for London was seen as a positive step in this new direction of working in the urban environment.



A healthy environment from a public health perspective

Dr Vivienne Press *Consultant, Cardiovascular disease and cancer prevention, Department of Health*

On behalf of the Department of Health, Vivienne made the case for countryside access as a way of limiting poor health. She linked diabetes, obesity, hypertension, cardiovascular disease, back-pain and osteoporosis to lack of exercise. Although food consumption *per capita* in Britain is declining, the incidence of obesity is rising, largely due to inactivity. Inactivity is a major cause of and concern in several important areas of National Health Service expenditure. National Service Frameworks set standards for a defined service or care group. Figure 1 shows a number of these frameworks and as described earlier physical activity can have an important positive impact on them.

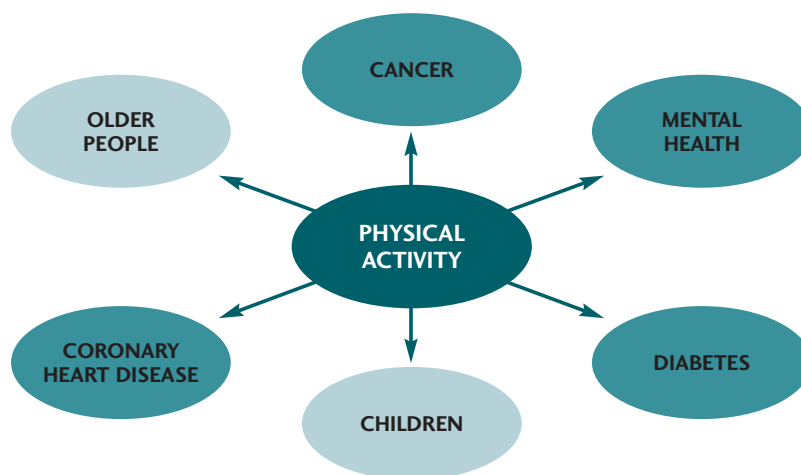


Figure 1 Physical activity can have a positive impact on National Service Frameworks, in particular those involving children and older people.

Previous research focused on vigorous exercise but Vivienne talked about the shift towards recognising moderate intensity exercise and emphasised the current recommendation for adults was to take 30 minutes of moderate exercise 5 days per week with this rising to one hour, 5 days per week, for young people. The prevalence of obesity in children is increasing, with the number of obese 15 year olds trebling over the past 10 years. Inequality in access to healthy environments acts as a barrier to public health. Physical inactivity is a greater problem among certain groups such as older people, some ethnic minority communities, people in rented council accommodation and the disabled. These are often the groups with least available access to natural space.



Re-birth of a community

Hazel Stuteley OBE Health Advisor to the Department of Health

This presentation was based on a vivid example of how deprivation at Penwerris housing estate in Cornwall led to destructive behaviour and poor health. Hazel described how it was easy to visit Cornwall and miss the deprivation and poverty of some areas within the region. Involving, educating and empowering the community in the Beacon and Old Hill Estate in Falmouth has had a dramatic effect on a whole range of social and health indicators. Hazel described the health, education and environmental outcomes derived from a partnership of community residents, the district council, National Health Service, police and a local junior school. The emphasis throughout has been on the communities and their wishes. Residents of the estate were at the centre of all decisions that affected the area in which they lived, encouraging their self-esteem and helping them work together towards a common goal.



New Cross Gate, London, and Beacon communities on an exchange visit, making a trip to the Eden Project, St Austell, Cornwall.



A group from the New Cross Gate and Beacon communities investigating an interactive display at the Eden Project.



Plants and healing: the Eden Project as a practical example

Sue Minter *The Eden Project*

A people-centred approach to the environment is adopted in the Eden Project. The development of Eden's positive message has had a profound effect on the rural development of Cornwall. Sue emphasised the psychological and therapeutic benefits of reconnecting people via memory to pleasant experiences and the importance of natural environments in stimulating all the senses. Many people do not understand their dependence on plants as sources of pharmaceutical products, and some have also lost the connection between food and health. Sue also described diet as crucial to well-being.



Children from the New Cross Gate and Beacon communities making the most of their visit to the Eden Project.



Green space and healthy living: opening up opportunities for a wide audience

Jane Stoneham *Sensory Trust, the Eden Project*

Jane explored social exclusion, including physical and psycho-social barriers to the use of green space. She described the key issue of bringing nature into places where people live, work and go to school as these are the most accessible places for people. Positive health-care environments, school environments and well-kept cemeteries add to health and well-being. Art projects can also enhance the experience by helping to get people involved and by providing an opportunity for children to be adventurous and boisterous.



Learning, health and the environment

Dr Christine Nightingale *University of Leicester and National Institute for Adult Centred Education (NIACE)*

Christine emphasised the positive benefits of high self-esteem and the impact of learning on health. General well-being manifested in levels of stress, physical and mental health, anxiety, and the ability to sleep and feel rested, are critically linked to feelings of self-worth and pride in achievement. The NIACE survey carried out in 1999 asked people to identify the emotional, mental and physical health benefits they gained from learning. Two forthcoming projects were outlined. One in Hereford is focusing on school leavers, involving them in wildlife activities through certified training. The other project in Bradford concerns first generation Bangladeshi women, allowing them to improve their English through learning about how to grow food for medicine.



Enhancing social learning about health issues: a case study of the organ gap

Professor Jacquelin Burgess [University College London](#)

Initial results from research into public attitudes to expensive medical interventions, such as kidney transplantation, formed the basis of this presentation. Jacquelin described the growing crisis in the governance of technology and public concerns about issues such as genetically modified organisms and the mumps, measles and rubella vaccine. Discussion groups were used to integrate expert and lay viewpoints. This deliberative process compared well with expert risk assessments, was socially responsive and included a wide range of values and priorities. People readily recognised that health promotion was a better option than expensive medical interventions, in that it was more cost effective, led to improved well-being and was unlikely to offend beliefs or reflect vested interests.



England's forest resource

Geoff Hatfield [Director, Forest Enterprise England](#)

In this presentation, the distribution of forests in England was described and contrasted with Scotland and Wales. In Southern England, especially, there is a predominance of privately owned local forests. The Forest Enterprise (FE) resource is concentrated in four major holdings: Dean, Kielder, Thetford, New Forest. Geoff pointed out the FE commitment to social forestry through the activities of the Land Regeneration Unit, and its land acquisitions near to centres of population, e.g. at Thames Chase Community Forest. The England Forestry Strategy recognises and emphasises the social and environmental benefits of forests and trees.





Keynote address

Dr Ruth Hall *Chief Medical Officer for Wales*

The day began with a keynote address from Ruth Hall, Chief Medical Officer for Wales. One of her main messages was a need to 'get upstream of illness', recognising that a large percentage of health expenditure is devoted to treating the results of unhealthy lifestyles, and that these lifestyles are embedded in society so that poor health prospects are heritable. Access to the countryside and to green space can have important benefits in terms of physical and psychological health, but there are barriers to access that are cultural as well as physical. She introduced the concept of 'Sustainable Health', based on 'Sustainable Development'. This is rooted in social change; unemployment is unhealthy, for instance, and improvements in the economy result in better health.

Physical activity is second only to tobacco as a determinant of health. One in six adults in Wales are now classified as 'obese', representing a doubling since 1995. Current advice is that 30 minutes of moderate exercise 5 days a week is all that is required to reverse this trend, and to have a major impact on the common illnesses – heart disease, cancer and Type II diabetes. Forests can help to make it easier to walk and cycle. New interest in 'Forest School' offers the prospect of learning in a healthier environment. Forest School is a unique educational experience using the outdoor environment as a classroom, with education tailored to a student's preferred learning style. The British Trust for Conservation Volunteers has promoted the 'Green Gyms' initiative and this has received a grant for development in Wales.

The Health Impact Assessment approach is more integrated with agencies beyond the National Health Service (NHS), and should play a major role in health development. Ruth gave a strong endorsement of the moves to integrate policies for health and forestry. A suggested good first contact to develop partnerships in Wales would be the Wales Centre for Health which is an independent statutory body.



Sustainable health and the lived environment

Professor Gareth Williams *Cardiff University*

Although he insisted that his expertise related better to the urban rather than the rural environment, Gareth was able to deliver a powerful message about the possible role of forestry in relation to health. Illustrated by readings from poetry and literature, he painted a picture of ill-health woven into the cultural fabric of the landscape. In Mythyr Tydfil, for instance, 35% of the population of working age were 'economically inactive' and many had no access to a car. Social exclusion is multidimensional, and expresses itself spatially in contrast to the 'landscape of consumption'. Hospitals do not solve the problems of exclusion and deprivation.



Woodlands offer opportunities for gentle, moderate and strenuous physical activity, e.g. mountain biking.



Health and exercise: a personal view

Rosemary Kennedy *Chief Nursing Officer for Wales*

Standing in at short notice, Rosemary gave an impassioned and personal account of the relationship between health and exercise. She confessed to a dislike of exercise *per se*, but emphasised that working or just walking in a natural setting could be both pleasurable and health giving. She also made the link between well-being and cultural meaning, for example a locally made hedge provides for the physical and psychological health of those constructing it and benefits the local population.



The Forest of Avon Tree Life Centre

Neil Hutton *British Trust for Conservation Volunteers*

Although this project (now well in progress) is based around the Forest of Avon Community Tree Nursery, it is more than just a tree nursery. Neil described how the Tree Life Centre has offered practical therapy to people who have experienced mental health problems, by involving them in the raising of young trees in a converted factory building. The project follows through to the environmental use of these trees and the 'Trees of Time and Place' campaign which encouraged people to collect and sow seeds and grow a personal tree for the new Millennium (sponsored by Esso). This has given new life to the Tree Life Centre. The project is now funded as part of the Community Forest Programme. Neil called for research to evaluate projects like this to demonstrate their value to the community.



'Play in the Woods'

Phil Tidey *Small Woods Association*

The Small Woods Association's (SWA) local woods campaign is designed to restore the links between local people and their woodlands. An innovative part of this programme has been the involvement of a theatre group, Beavers Arts, to work with local communities to explore their relationships with local woodlands, using a variety of artistic media. In the first year, SWA and

Beavers Arts jointly presented 'Play in the Woods', described as a theatrical exploration of woodlands past, present and future. In year two, in 'Touching Wood', Beavers Arts worked with four communities across the West Midlands region using the arts in different ways to engage local communities and promote the value and use of woodlands.



Artistic media such as sculptures can attract people to view the landscape in different ways. This arch is in Galloway Forest Park, Dumfries and Galloway.



Family friendly walks

Raywyn Law Co-ordinator for Sure Start, Play Grant and Child and Youth Partnership in Ceredigion

The Sure Start programme, in collaboration with the Forestry Commission, developed an initiative in Ceredigion for families with preschool children. The programme develops parent skills (some of the parents are very young), and achieves early learning outcomes using freely accessible woodland and promoting healthy lifestyles. For low-income families, woodland use provides a low cost opportunity for outdoor exercise, a welcome alternative to the expense of toys or theme parks for example.



Communities First programme

Owen Thurgate National Assembly for Wales

The Welsh Assembly Government is concerned about the level of poverty in many communities in Wales, and 'Communities First' is about directing funds to the poorest communities. It is a long-term programme and encourages the participation of local people. The Welsh Assembly woodlands are often located close to areas of deprivation, and they have the potential for development for and with local communities, to promote jobs, business, an active community and a healthy environment. In this context 'the environment' means existing or potential woodlands within walking distance. Owen illustrated these points using the example of Onllwyn, an ex-mining village where poverty and woodlands are juxtaposed. He suggested that woodlands have a huge amount to offer but the driving force must come from the communities themselves if there is to be long-term success, and 'Communities First' can assist this process in a variety of ways.



A nursery group with a forest ranger in their local forest school in Wales.



The forest resource

Dr Bob Farmer Director, Forest Enterprise Wales

Bob showed a short video, highlighting the existing activity of FE Wales in involving local communities and encouraging access to the Welsh Assembly woodlands. In his presentation, he demonstrated the distribution of the woodlands throughout Wales, and how they were very often close to areas of high population and low income. He felt there was significant potential for increasing woodland access as the woodlands were 'nowhere near saturation in terms of visits'.



Synthesis from the four workshops held in each country

- Workshop outline
- Policy and practice
- Research
- Promotion

Workshop outline

The workshops held at each event were centred around the four main themes of:

- Policy
- Practice
- Research
- Promotion.

The themes were formulated at pre-consultation meetings in each country at which a range of key people from a variety of organisations discussed the format of each event.

Participants in each workshop discussed the key issues and barriers related to each theme. Allocation of the groups was based on the expertise of the individual and then balanced so that each group had a good mix of people from different backgrounds and disciplines. A chairman and a rapporteur were appointed in each group, which was given 1–2 hours to deliberate and then to report back to the plenary session. The synthesis is based on the notes, presentation outlines and reports provided by the groups. Further recommendations discussed during the three events, that also deserve attention, are outlined at the end of this synthesis after the Promotion Workshop.

Discussions were wide-ranging, and there was considerable overlap in what was discussed between the three consultations, and between groups. To make sense of this, all the reports were coded using qualitative research software (QSR – NVivo). Each section of text was coded depending on the theme of the discussion, so that all information on a given topic could be brought together. The synthesis follows these topics under the main themes.

While separate workshops were held on policy and practice the outcomes from each have been joined together in this synthesis because many of the issues discussed overlapped.



Policy considerations

The need to integrate policies

Integration of policies across the various sectors concerned with community health and environment or countryside management was an obvious suggestion. However, there is a plethora of relevant policies; the sheer number is daunting. Over 30 national, regional and local policies relating to health and the environment were identified in five minutes in the English policy workshop including those outlined in Box 1.

Box 1 Policies relating to health and the environment

NATIONAL

Biodiversity Action Plans, Countryside and Rights Of Way Act, Health White Paper, Urban and Rural White paper, Sustainable Transport White Paper, Policy and Planning Guidance, National Forestry Strategies.

REGIONAL

Mayoral Strategies (Transport), Spatial Strategies, Cultural Strategies, Regional White Papers, Regional Economic Strategies, Development Plans, Crime and Disorder Strategies, Sustainable Development, Sport Lottery, Health Improvement Programmes, Neighbourhood Renewal Strategy.

LOCAL

Local Economic Strategy, Local Strategic Plan, Community Strategies, New Deal for Communities, Crime and Disorder Policy.

The influence of politicians is strong, but political will is not strong at the moment to join up policymaking in this area. There is a need for a change in attitudes; policymaking is currently too departmentalised. How can crosscutting be encouraged? We may need a national agency that will link health, leisure, recreation and the environment.

Health impact assessments should be more widely undertaken and consideration given to integrating issues of housing, employment, transport and the environment. It is not always easy to contact the key people in different policy areas. Central Scotland Countryside Trust have produced a health strategy which brings together physical, mental and social health. A number of issues such as poor living environments, poverty and unemployment are all influential in affecting human health. Their aim is to enhance understanding, engage with various partners and communities and implement practical activities to enhance people's health. Health and well-being strategies could be produced in partnership with a variety of interested agencies, building on existing schemes where possible.

Planning

There is a need to integrate countryside policies with Town and Country Planning policies, for instance with respect to housing. Planning guidance should recognise the potential public health benefits of access to natural spaces. Health and well-being benefits derived from natural spaces also need to be incorporated into new planning tools such as spatial planning. The Welsh Assembly Government has begun the process of integration in relation to health. The Forestry Commission and other countryside agencies and local authorities and health authorities also need to undertake impact assessments, taking in crosscutting themes such as:

- Health
- Economy
- Equal opportunities
- Inclusion
- Environment.

Health needs to be taken into account in the development of any policies affecting places where people live and the associated natural spaces, possibly through the use of Health Impact Assessments. Policy development should not solely concentrate on the deprived ('Community First') areas but should include private and public woodlands and the wider countryside.



Improving the local environment: conservation volunteers clean up Littlewood (Liverpool).

Planning should allow for innovation and recognise the benefits of green space and the importance of regenerating degraded areas. Urban green space is under threat. Planning guidance should promote the availability of good quality accessible open space near to where people live and ensure that appropriate open space is incorporated into developments. Planning for housing developments should concentrate on preventing sprawl. Linking regular exercise and health is important, and provision should also be made so that people can fit this into their daily routine, for example by walking or cycling. In other words, planning should incorporate natural spaces into residential areas to facilitate walking and cycling between houses and schools, for instance, separating these activities from motor traffic, and allowing them to take place in a more attractive and natural environment.

Employment

In deprived areas, especially in rural regions in Scotland and Wales, the potential of forestry to provide employment, either directly in wood production and utilisation or indirectly through recreation, community work and conservation, emerged as a crucial factor in relation to health. One of the best ways of encouraging a sense of ownership is to provide opportunities for employment. 'Traditional' primary sector employment in rural areas improves both mental and physical health in relieving the depression and inactivity of unemployment. Provision of healthy exercise facilities for city-dwellers can complete a virtuous circle by also generating direct employment and jobs in service industries.

Education

There was a discussion on physical education in schools and how physical activity has been reduced. Secondary schools have sports co-ordinators and their role and agenda should be broadened beyond that of teaching sports such as football and netball so that children can be taken out to nearby green spaces and experience their local environment. Co-ordinators could be introduced to local woodlands so they would then know where to take children for physical activity in the outdoor environment.

Access to green space for learning is not just about 'the environment'. For young children, there is perceived to be great benefit in teaching most subjects in a natural environment. On the other hand, some participants asked if we need to provide more screen-based experiences for children/young people to avoid disappointment through 'not seeing anything' (e.g. wildlife) in the course of their visit to the forest. Wildlife cameras and video links may be viewed as intrusive by some, but may encourage more children to go to the forest and make repeat visits. The need for locally accessible woodlands as a resource for schools was identified, and also the possibility of improving the quality of school grounds and other already accessible spaces. Schools in Los

Angeles have been taking up half the asphalt in their playgrounds and getting the children to plant trees, not only improving the children's immediate environment but involving them in a practical way and providing them with feelings of accomplishment. The design of accessible green spaces need not match conventional ideas about 'the countryside'; they can be more in tune with present-day trends, for instance the provision of skateboard or BMX tracks would help to make woods more accessible to young people.

There is a scheme to link primary schools with farms, and this could be extended to link them to other green spaces including woodlands. However, education should not just be confined to young people; everyone should have the opportunity to use woodlands for continued lifelong learning.

There is an urgent need to encourage young people (pre-school and primary school in particular) to use forests and woodlands, matched by the need to educate parents regarding the benefits of, and possibilities for, safe unsupervised outdoor play for children. Multi-functional and accessible woodland and forest can provide the infrastructure/setting for health education and the

opportunity for putting it into practice. There is potential for more school groups to use woodland, but families should also be encouraged into forests; schools and teachers cannot be expected to take total responsibility for environmental and outdoor education. Children's access to forests could be seen as a step in tackling child poverty and providing equality of opportunity.



Local school children were involved in designing this totem pole which is being created in Littlewood (Liverpool).

Partnerships

We cannot achieve our objectives without working in partnership with other organisations. Partnerships widen the scope of projects and provide greater funding opportunities. We need joint messages to tell a coherent story. Working in partnership could improve this. It would make more sense for forestry interests to make contact with existing health-related partnerships rather than to 'reinvent the wheel' on health and forestry issues. Partnerships may help decrease wasteful competition for funding with organisations coming together to apply for resources.

In Wales, participants suggested that we are now working on challenging fifty years of memory and understanding of the forests as a resource that was divorced from ordinary people. It was proposed that the best way to engage the people of Wales with forestry and woodlands would be through partnership working with geographical communities and communities of interest.

Funding

Funding was seen as a key issue in improving community health. There is a need for secure and longer term funding from sources that recognise the importance of green space. Possible sources include:

- Government Departments
- Private sector
- Charities
- Primary Care Trusts
- New Opportunities Fund
- European/Rural Development Funds.

Development resources need to be fed into local communities to increase their skills and build capacity. Funding for projects should normally include money for research and evaluation that could provide important information and lead to effective targeting of resources and agency efforts.

There may be economic gains to be made by public and private sector engagement with more public access focusing on health benefits. However, while the public sector may be able to justify 'health diversification' on the grounds of 'public good', the private sector may experience more difficulty in identifying profit in 'health diversification'. Charging for woodland access is not going to be realistic but woodland owners/operators should be encouraged to focus on economic benefits generated from woodland visits. Issues of public access and liability are central to private owners' concerns. Private sector owners could be encouraged to realise that forests with high visitor numbers are less likely to be vandalised, and as a result they may wish to encourage right-minded visitors rather than those who prefer to engage in covert activities in remote forests. Maintenance costs of infrastructure such as paths, bridges, bike tracks and associated liability insurance is also a problem area. The issue was raised as to whether current grant schemes support the promotion of forests for health. The Forestry Commission's Woodland Grant Scheme is being revised and there are opportunities for widening the scope of grant aid to support health and well-being. There is currently some change within the National Health Service with money being made available to promote public health. This is still small compared with the total funding spent on curing people once they become ill.



Attributes of potentially successful schemes

Community engagement

Policies are needed to consolidate the (health/countryside) agenda for the long-term and to promote community ownership of it through participation in the decision-making process. 'Bottom-up' approaches to community planning and engagement were advocated rather than organisations and agencies deciding what communities need. Good work is being undertaken at a local level but this is not evident across all areas of government. Communities should be engaged from the beginning in setting up schemes and designing local environments. A bottom-up approach should be taken so that local people can decide what would be best for their own locality.



Learning about the environment through a fungal foray with a ranger.

'Planning for Real' is a good tool for woodland design to ensure community involvement and to discover the important issues for different communities. There is a maintenance and planning issue surrounding the physical design of these spaces to maximise health benefits. Community engagement and participation is advocated to establish what type of places people want and where they would be of most benefit. It will be important to get the right balance between consultation and action so that people can see that their views are being taken into consideration and acted upon, and to accept that however hard we try, not everyone will be interested. If green space meets people's needs they may be more likely to use it and frequent use will often help to deter abuse.

Social inclusion

Social inclusion agendas related to forestry and the environment are important but who actually benefits most from participation and inclusion in the countryside? The people to target for health benefits are also often the hardest to work with as they are the most socially excluded. We need to:

- discover excluded people's needs and wants;
- build trust and social capital;
- establish inclusive policies that make it easier for excluded groups to get involved.

The social element of healthy walking schemes has been shown to be important in encouraging people to remain active. In Edinburgh a horticultural project has been successful in involving local people on a housing estate, with social benefits accruing from the community meeting and working together.

The elderly are an obvious example for study of a potentially excluded group. This might involve a better footpath network, access for wheelchairs, and benches so that people can sit and rest. Usage of green space by the elderly is currently under-researched.

In her presentation Catherine Ward-Thompson emphasised the importance of young people using green space and how this affected their use as adults. It was suggested that the link between young people and the outdoor environment was being lost because of computer and TV use and

because of parents' fears for their children's safety. Who are the decision-makers in the group? For example, it may be children who ask their parents to take them to particular woodlands for a good day out. Or it may be children who say they do not want to visit woodlands but want to go somewhere else, perhaps to a theme park. Consideration should be given to how we get sedentary people to take some exercise every day. Is focusing on children the best way, for example, to encourage fathers to take up cycling?



Orienteering course for the disabled at Revelin Moss, Whinlatter in the Lake District provides opportunities for a range of abilities.

The different needs of 'communities of place' and 'communities of interest' should be catered for, for instance by encouraging agencies to take innovative steps; the Forestry Commission hosting major pop concerts, for example. It will be vital to consider appropriate strategies for different communities; for example, in a community where many people do not work, a campaign encouraging people to cycle to work would not be well-received.

Forests or woodlands need to be close if they are to be used regularly by local people. Overall it was felt that the key to good local provision for people was access both to the woods and to information about the woods and activities that they can take part in.

Ownership

It was argued that woods/green spaces might be better used if people felt a sense of ownership. This can be achieved by linking schools and communities. Local community management or management control can provide a sense of ownership. Public uncertainty concerning access rights must be overcome. A particular view from the Welsh workshop was that people living in Wales did not feel a sense of ownership over the forests and woodlands of Wales and that the perception of Welsh forests was that they were part of historical 'internal colonialism' imposed on Wales. In the past the Forestry Commission viewed forests and woodlands as 'work sites'; and local forest managers were seen as having complete control of forestry issues, and so excluding freedom of use by local people. These perceptions lived long in the local 'folk' memory, and the general public still did not feel welcome in the forest, or feel that the forest and countryside belonged to the people of Wales rather than to private landowners or 'the Forestry'. Significantly these views contrasted with the closing comments by Gareth Roberts on the critical importance of forests and woodlands in the history of Welsh language and cultural life. This implies that an older connection between the deeper cultural connections between forests and people in Wales may have been broken during the era of modern forestry.

Campaigns could be run to regain a sense of local ownership of the forest resource. It was suggested that this type of campaign could be linked to the 'Communities First' programme, and connections could be made between social, physical and mental health and respect for the environment.

Social norms

Poverty of understanding of the natural environment and how to act within it was raised as an important issue for many people. It was suggested that disadvantaged life experiences led large numbers of people to be unsure of how to engage with, and gain benefits from, the natural environment. The participants asserted that social norms would influence how people behave in their work and leisure hours, and that for many people forest activity would be beyond their social and known cultural experience. Participants discussed how long it would take for forest activity to gain popular acceptance, i.e. to become a social norm, and reflected on other public information/health promotion campaigns and how long it took for the public to accept and adopt changes in behaviour. 'Stop smoking' campaigns, promotion of the use of sunblock, and opposition to drink-driving were provided as examples of health promotion campaigns which changed social norms.

Those in rural and urban areas may have different views on using local woodlands for exercise and health and well-being. Woodlands may be viewed as a working area, rather than a space for recreation, while they may also be seen as unsafe places, i.e. areas where people may be attacked, or as places for various forms of anti-social activity. When considering what activities to undertake with the family at a weekend, individuals would contrast the safe, known environment of a shopping

centre or leisure complex with the 'dangerous' forest environment and pick the shopping centre as their preferred weekend activity location. It was agreed that for a large number of people forests are not a choice for leisure activity that appeals and therefore are not always a positive recreational option for people with children.

However, participants who lived in rural areas said that some rural people were afraid of the city environment in the same way that city folk were afraid of the rural environment. Participants also



Exploring the outdoor environment through adventurous play at Moors Valley Wood, New Forest.

queried whether it would be possible to encourage urban people to think positively, rather than negatively, about activity in forests by getting them to reflect on the benefits to be gained from being outside and close to trees.

Organised and non-organised activities can be viewed as appropriate use by some groups and as anti-social behaviour by others. Forestry examples include rock festivals, motorbike scrambling, hunting, drinking alcohol with friends which could have different meanings for different groups and individuals. Views may differ on what is 'anti-social', but some users may exclude others by their activities.

Quality and design of woodlands and green spaces

People need to have the confidence to use woodlands and green spaces. Sometimes the space that is available is of poor quality or of the wrong type so that it does not meet local needs. This encourages vandalism, leading to lack of use, and further vandalism, creating a downward spiral of neglect and abuse. The issue of signage was raised and its role in making sites welcoming and providing useful information. Organisations should adopt standard livery and quality of signage to ensure familiarity and to remove perceived barriers of access or ownership confusion. It has to be made clear what spaces people are allowed to use.

Signs are often vandalised as soon as they are put up, particularly in urban areas. Participants recognised that signs may have to be replaced repeatedly and suggested that after a few years they would often become accepted.

The location of green space is clearly a key factor in determining its use, and this needs to be incorporated into spatial planning. Green space can act as a destination and a through route to other places/spaces. For this reason, transport infrastructure and green space should be integrated as part of planning.

Primary Health Care Trusts should assess their green space resource (at health centres and hospitals) in terms of quality and quantity and look for opportunities for improvement. General Practitioner referral schemes are now bringing in walking schemes as well as encouraging people to attend gyms at their local sport centres. Perhaps prescriptions could provide for walking several times a week (e.g. by joining a walking group), or for other activities such as dance workshops.



Family on a forest trail in Wendover Wood stop to admire bluebells.



Enjoying a solitary winter walk in Sherrads Wood, Hertfordshire.

Fear and safety

For some, fear can be a determining factor in their use of green space and woodlands and this may not necessarily be related to actual risk; rather the perception of risk can be high among certain groups who feel vulnerable. Issues of fear and safety in woods, especially in relation to women and minority groups, were raised a number of times during the workshops. Specifically, participants identified a range of fears and concerns as outlined in Box 2.

Box 2 | Wide-ranging fears and concerns.

- Fear of being attacked by strangers in a forest.
- Concerns about getting lost on unmarked paths.
- Fear of being attacked by wild animals, including large mammals and (in the popular imagination) snakes.
- Fear of 'what might happen' in an unknown, unfamiliar environment.
- Concerns about not being welcome in a forest and the consequences, such as being challenged by a hostile gamekeeper.
- General fear of the forest as a wild, untamed, dangerous cultural space.
- A wariness of the natural world where human beings have no control.
- Fear of being a victim of crime in an area with limited mobile phone reception.

Participants suggested that the widespread perception of fear and insecurity that forests generated meant that healthy activities in forests would have to be developed around social activities that could be undertaken in a group.

On a more practical level participants also raised concerns about fear of crime against property – in particular car crime and theft of cars, or theft from cars left in a car park. Participants questioned whether families with children would have the confidence to undertake forest recreation when they were not 100% convinced that their car would still be in the car park at the end of the day. Some suggested that the practicalities of a situation where parents may have three children under the age of 10 and no car in a remote rural location would prevent families from considering forest recreation.

The idea that woodlands are places to fear is deeply embedded in cultural myth, and is fed by media stories such as 'body found in woodland'. Efforts should be made to provide a counter narrative. Also, at a practical level, agencies can work with groups to discover ways of providing safer access or reducing the perception of threat, e.g. through voluntary rangers or woodland design. Wardens or rangers, both voluntary and organisational, can provide a reassuring presence for those who are afraid or fearful of using woodlands. Another example of tackling people's perceptions of fear was provided from America – an environmental conservation organisation in Vermont is holding workshops for women to teach them navigation skills and build their confidence when going out into the natural environment.

Alternative solutions

Other possible solutions advanced for resolving fear and safety include those in Box 3.

Box 3 | Resolving fear and safety issues.

- Provide detailed forest maps.
- Improve signing for specific forest walks.
- Produce signing to indicate different levels of walks.
- Provide wardens.
- Provide CCTV in specific/designated forest locations and areas.
- Arrange family-oriented activities and group-oriented activities.
- Supply visible security measures in high risk forest car parks to make it 'worth the gamble' to leave a car in a forest car park.
- Zone forest areas to provide options for 'safe' or 'exciting' activity.

Many of these solutions are already implemented in some localities.



The need for an evidence base

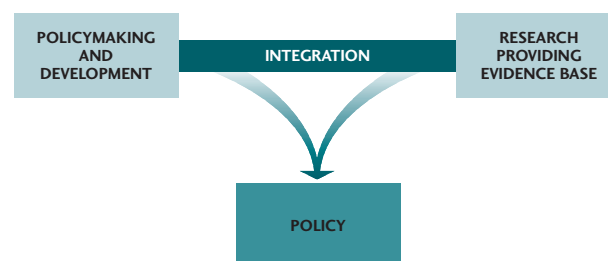
Participants talked about what research involves and a variety of issues and topics that might be addressed by different research projects. Consideration should be given to projects that will engage the interests of both health and countryside professionals. Projects are being set up although evaluation, which would provide evidence of their possible benefits, is not always undertaken.

Research involves:

- Gathering/assembling evidence from existing as well as new projects.
- Evaluation: what tools will be appropriate in assessing practical projects. For example, evaluate and demonstrate the effects of community involvement in schemes to promote forest access, in terms of health, skills and community pride.
- Advocacy: recommending action points, policies and strategies.
- Benchmarking so that progress can be assessed and an evidence base established to support new/further schemes.
- Establishing examples of good practice (learning from good and bad practice).
- Effective dissemination of research knowledge to different organisations and stakeholders.
(There is a need not only to share information on whole projects between environmental and health disciplines but a need to share different research methodologies as well.)

The call for an 'evidence base' to draw on in seeking funds for community projects, and in making arguments for changes in policy, was a recurring theme. The relationship between research and policymaking was discussed. Figure 2 outlines relationships between research and policy development. Research should not just advise policymakers, but should also be integrated with policymaking. Since policies are financially driven, many participants thought there was an overwhelming need for robust quantitative evidence looking at the economic benefits of measures to improve community health, for example, and linking this with evidence of increased physical activity as a result of access or education initiatives. There was a debate on the need/morality of using financial indicators to assess health and well-being as these are often blind to ideas of equity and justice.

Figure 2 Research can provide an evidence base to inform policy development.



Treasury guidance now officially acknowledges the importance of qualitative as well as quantitative information. Evidence should be based not only on numbers but also on people's perceptions, experiences and self-reported feelings of well-being.

Emphasis on qualitative research, including case studies, was advocated by some, who also recognised the need to consider different levels of analysis, i.e. what is the effect of forests and the environment on the community as well as the individual? Current focus was thought to be too much on the individual.

Organisations need to create the argument for this new emphasis and to review what counts as credible and useful data. For example, in a study on forestry, community and land in the South Wales Valleys, residents were given cameras to go out and photograph their local environment. The results were interpreted by the researchers to derive underlying attitudes and beliefs. Does such evidence have power in policy making?



Research issues and topics

Participants discussed the various issues and topics that they felt needed to be addressed and these followed a wide range of possibilities as shown in Figure 3.

Figure 3 Linking research topics and issues.

Topics

Woodland use

- What are the barriers preventing people from accessing forests?
- Who uses woodlands – types of user by socio-economic class, gender, age, ethnicity etc.
- Anti-social use of woodland. Views may differ on what is 'anti-social', but some users may exclude others by their activities.
- What do trees actually add? Is it more to do with the value of being in nature and green space that has an impact on health or do trees for some reason have a specific value? Is there something unique about trees?

Increasing understanding

- There is a requirement to understand better the influence of physical activity in forests. What are the effects of social activity related to the forest and health, in addition to the benefits of physical activity?
- There are many assumptions about the benefits of access to green spaces and the desire for access. Do we actually want more people in the forests as this may spoil the isolation, which makes it attractive to many in the first place? These assumptions and others need to be investigated.
- What are effects of green spaces on different groups of people?
- Further research is needed on how walking improves public health; some research (by William Bird) is currently being undertaken in this area and has demonstrated that natural environments can reduce stress and enable people to withstand further pressure and stress.
- How can countryside managers encourage access by those who need exercise?
- How can the cycle of deprivation be broken and community pride be restored?

Issues

Context-specific information

- Comparative studies were recommended to look at how the same health/environmental initiative might work differently in different contexts (in urban and rural areas for example).
- There is US based research (by Roger Ulrich) on the relationship between green space and health. There is potential for this work to be repeated in the UK. Much of the work however is very much laboratory based and there is a need to make it more context based and specific.

Evidence and data collection

- The use of happiness/optimism indicators should be pursued as part of an active research programme.
- There is a need for some form of website or database of projects (both completed and ongoing projects) that could be updated regularly, and related to this there is a need for a scoping/mapping exercise to identify the existing literature and information and define research priorities. A suitable database could be used to identify knowledge gaps.
- Evidence is needed on the green space that is easily accessible to different sections of the population.
- What imaginative methods of collecting data would generate enthusiasm among local communities to get them involved, e.g. telling stories through art or metaphor.

There is a tendency for research to be done to satisfy research funders with information that is not then disseminated as widely as it should be. Resources should be targeted to maximise public benefit, and this means that public benefit must first be evaluated. Local communities could be empowered by including them in the appraisal process ('not extractive but reciprocal').

There is a need to distinguish between the practical side of social forestry and the researching of social forestry. Do we actually need theoretical research into the subject or should we simply be evaluating what works and what does not? Mutual learning is needed between public agencies and funders. Funding should be made available to turn research into something useful and practical for the ordinary person.

A 'walk to health' scheme in the Grampians looked at people's mental health and how participants perceived improvement in themselves from walking. It was acknowledged that time scales would sometimes be long-term if looking at research into how people improve and benefit from contact with nature. Agencies should liaise amongst themselves so that when studying a particular area communities do not feel that they are constantly being consulted.



All-terrain disabled chair adapter being used in Moors Valley Country Park, Dorset.



Why promote linkages between community health and access to natural spaces?

Accessibility is achieved not just by making space accessible but also by making information accessible. The key to good local provision for local people is access both to the woods and to information about the woods and activities that they can take part in. Making information available does not ensure uptake, however, and uptake is important if health benefits are to be realised. The benefits include:

- Happier, more fulfilling lifestyles
- Savings in medical expenditure
- Economic regeneration – healthier workforce, and more attractive places to live and work.

Therefore, promotion of access needs to assess ways of encouraging everyone, including those who currently make very little use of open space and who may benefit most in terms of health.



Who is the target audience?

The influential people in policymaking and funding are many and varied. Therefore a whole range of local stakeholders, central and regional government and also Primary Care Trusts need to be addressed, and strategies co-ordinated at these different levels. Health managers and others may be unaware of the importance of trees to health: examples were quoted of a hospital manager who could not understand the importance of planting trees around the hospital premises. The publics who should benefit from community health promotion are also plural. There was a perception that the large majority of people were apathetic about their health. Getting the public to care about health and the environment was considered important. For example in Finland people became angry about their health record and pushed the government to make changes in policy to improve public health.

Workshop participants asserted that there was a widespread perception in Wales that forests were not for ordinary people, 'people like us', and that those who made regular recreational use of forests and woodland were likely to be the middle class 'green welly brigade' who typically 'drove Volvos and had Labrador dogs'. The other group likely to use forests were considered to be environmental extremists, bird watchers, ramblers and 'anorak-wearers'. In general, participants felt that families who were used to sedentary leisure pursuits thought that forest users were 'nerdy' and forest use was an 'un-cool' activity.

The promotion of the educational aspects of the forest environment was seen as a possible way to pull more people towards forests, particularly from urban areas. Needs analysis was suggested as a method to assess how different groups of people could be encouraged to use forests in a way that was relevant to their specific circumstances. However, the experience must be attractive if the opportunities are to enjoy regular appeal. The group agreed that it was important that individuals had to have a focus in the forest that met a 'want' rather than a 'need'.



Learning outdoors: looking at wood anemones in the New Forest.



Who needs to communicate?

Interest in community health and the environment is likely to come firstly from professionals in both the health and environmental sectors. The type of promotion chosen will be dependent on perspective; either the promotion of the open space resource or the promotion of the health product/outcome. Ideally, a partnership approach should be adopted to develop a coherent message.



What messages need to be communicated?

The main message in need of more general communication among policymakers and professionals is the detailed connection between health, well-being and the environment. This message needs to be backed up with credible evidence, so research, monitoring and evaluation are crucial. There is a need to understand public opinion, which is conditioned by history to an extent. The reputation of the message-givers has to be assessed before a strategy can be determined.



Cathedral sculpture in the Forest of Dean: sculpture trails in woodlands can stimulate the senses. Current research concludes that diverse sensory and intellectual stimuli are key elements in increasing our capacity for learning.

The strap-line: **'Forests can seriously improve your health'** ran into some criticism at one of the workshops. The reputation of the message-givers has to be seen in local context, and in the South Wales Valleys, for instance, the local understanding of 'the forestry' may make it difficult to get over the health-giving properties of trees and woodlands. Hence there is a call to 're-brand' forestry messages. One target here was the word 'forestry' itself, which was thought to have such negative connotations in some areas that even 'social forestry' needed re-branding. Another important point is that the concept of forestry may be too narrow in the context of health promotion. Are trees viewed as a distinctive/separate resource? Do people view trees as part of the general countryside or part of an area which is simply 'not the city'? Can we link forests with other natural resources that might promote health? Even the term health could be considered off-putting to some groups, so we should promote activities as fun, exciting and adventurous rather than healthy.

Another aspect of the need to see promotional activity in context was the point that agencies need to be aware of changing political priorities, e.g.

changes in the National Health Service to a greater focus on Primary Care Trusts. Local plans for promotional activities must take account of local circumstances in terms of how institutions are viewed, as well as special locality factors affecting the relevance of the message.

Participants suggested that the notion of going into the forest to 'do exercise' would not act as an incentive for people to access the forest, and suggested that forest participation could be marketed as part of a broader health education programme to encourage people to attempt to try to do 30 minutes exercise a day, for example a moderate walk through the forest. It was agreed that it was challenging for people to attempt to incorporate exercise into a sustainable life plan, but that forests could have a role to play in sustainable lifestyles for both rural and urban people. It may sometimes be more effective to make the exercise and the health element of countryside use incidental. It should be remembered that not everyone wants to do things because they are healthy: we can package things so they are fun events and activities, and the health benefits are incidental, for example, fun days or pub walks. Being active is important but sometimes it is mental well-being rather than physical well-being that is the more significant.



How can we get the message across?

Doctors currently encourage walking but it was felt necessary to reach people before they go to their doctors. It is not about being prescriptive but more about providing opportunity; giving people confidence and empowering them to make choices. It was acknowledged that feedback from the local community was often more important than a recommendation from a GP to take physical exercise.

Language needs to be chosen carefully to sell the story of the links between health and the environment. This may need alliances to include various environmental organisations and health professionals. We need to promote access to the outdoors as natural and attractive, targeting appropriate messages to the characteristics of different communities. The countryside needs to be marketed in a contemporary way, recognising that people are already bombarded with many media messages. Forestry people often use messages that are too wordy. Videos can help to get messages across to young people who are used to this medium. Also art and artists can find ways of stopping people in their tracks and interesting them in a new idea. Professionals and organisations can often engage people by telling their own personal stories; for example it was suggested that Forestry Commission staff could visit estates in cities to talk about woods.

General disinterest in this type of promotion, and a media that often focuses on negative stories rather than stories of health benefits, were recognised as barriers to be overcome. There is a role for the media to change people's views and disseminate evidence about the links between poor housing and a poor environment affecting people's health. Information on health and the environment should be packaged into a marketable commodity that is easily understood and accessible to everyone.

Participants suggested that forests could be promoted as welcoming and exciting places, and that practical action could be taken to improve signing and to make entrances to forests more welcoming. One idea was to provide guided 'taster' walks for members of the public who had never been in a forest before, and also group walking, led walks and 'prescribing' group walking in forests through GPs or other health professionals. Participants made reference to the Healthy Walks Programme in Caerphilly and suggested that other areas could look to similar projects elsewhere in the UK for examples of good/best practice on promoting walking and exercise.

There was probably an assumption amongst the expert seminar attendees that forests were 'good for you', and that forests could play a part in helping people from all social classes to adopt a healthier outdoor-recreation-oriented lifestyle. However, the extent to which this view was shared across a broader section of society was questioned.



Living willow sculpture: the use of art can interest people in the environment.



Communication through action

'Actions speak louder than words' and some suggestions were made for activities that would help to get the message across, for instance by providing exciting opportunities, such as paint balling, theme park woodlands.

One interesting suggestion was to provide a log cabin on every deprived estate, somewhere children and families can learn skills, a centre that is inclusive and can help build community ownership and community links.

Mental and not just physical well-being was considered. Why not use the woodland for yoga, tai chi, meditation; woodlands can help evoke a sense of calm and relaxation.



Social event: a family enjoying a barbecue at Beechenhurst, Forest of Dean.



Further recommendations

Some further ideas discussed at the workshops deserve special attention. One was a suggestion for a national centre for research into the relationship between health and the environment, a centre responsible for the dissemination, generation of findings and identification of best practice. This could perhaps be achieved by creating a fund or trust, possibly to be managed by an existing institution or organisation.

A related idea was to establish a lead agency to act as a champion on health and the environment. The agency could co-ordinate partnerships and draw together current work and disseminate information. Another task would be to benchmark and develop best practice from abroad and within Great Britain of schemes which link health and the environment and which have proved to be successful. Local authorities, environmental groups, health and education authorities need this information.

Demonstrations

There were several suggestions for demonstration projects or for a 'network of good practice', from which people can get information and advice or work together on projects or share information and results. The idea would be to:

- Develop networks through workshops, seminars, internet discussion groups.
- Work in partnership to extend networks.

A substantial regional project could be set up to act as a focal point of best practice. The project should be evaluated and information disseminated on what works and what does not work. A demonstration project could cement an integrated approach between various partners and provide an evidence base for policymaking. Taking a multi-agency approach could be used to increase the funding possibilities. The evidence could be based on people's views before and after the project by those involved. Well-being as well as health should be measured to include social contacts/networks and social capital. Social contact was considered to be crucial and can be as important as the exercise element of a GP referral, for example.

A number of schemes concentrating on health and well-being such as walking schemes are currently being undertaken but these are generally on a relatively small scale. There needs to be a step change to undertake larger projects, for example a 1000 kilometre cycling track would make a big difference. Or is there a need to focus on small, local quality projects? Scale is important and needs to be considered in setting up projects, e.g. from Scotland as a whole to an area such as the Scottish borders and down to a local level. There is currently a lack of good statistical data on health especially in rural areas; projects should be undertaken in both urban and rural areas. The main partners in a project could be local authorities, Forest Enterprise and health authorities, and for smaller scale projects other local partners should become involved.

Staff roles

Local staff were seen as the key deliverers. One suggestion was for 'forest/open space health workers' to work within the forest but also to reach out to all sections of the community. The role of the forest health worker would be to bring people and resources together at a local level, and to act as co-ordinator for projects and research.

New and future opportunities

The three expert consultations provided an important opportunity to bring together environmental professionals and health professionals to explore areas of mutual interest and to consider issues that they may not have previously thought about. This publication is designed to provide a basis for the discussion of future partnerships, networks and projects between these groups. After the consultations had taken place the Forestry Commission in England brought together a focus group made up of a number of participants who had attended the English event to talk about woodlands for health and well-being. The focus group was enthusiastic about the role the Forestry Commission could play in improving the nation's health and well-being. Possible future projects are being discussed locally within the three countries in order to move forward the agenda on health and well-being in relation to woodlands and trees. The workshop discussions also illustrated the need for a multi-disciplinary approach to research incorporating both qualitative and quantitative methods. The discussions on partnerships include not only partnerships between different organisations but also with local communities in which any projects are likely to take place.

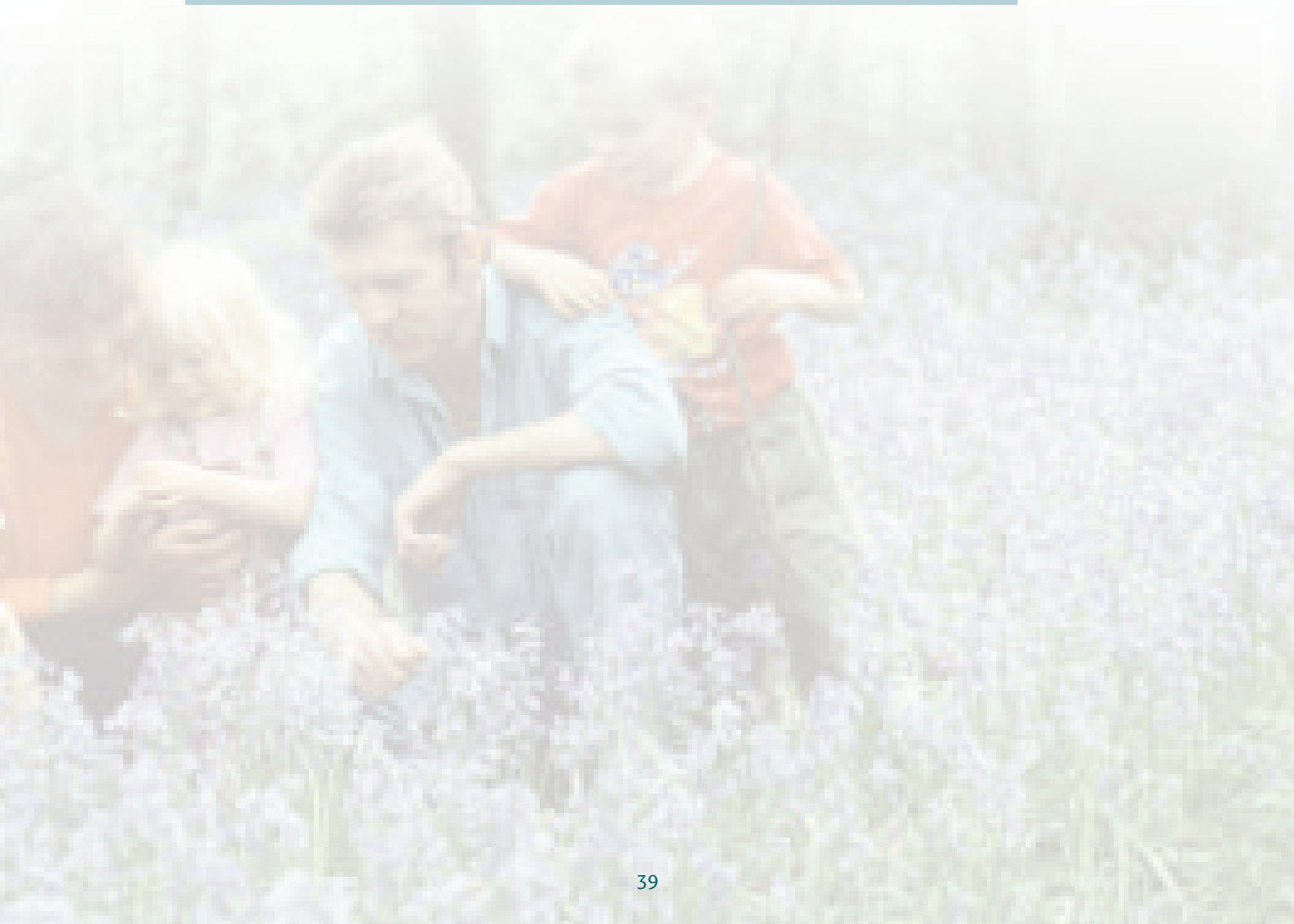
Change is taking place within the health sector with the devolution of power to Primary Care Trusts (PCTs) offering opportunities for local decision-makers such as nurses, midwives, doctors and health visitors to provide and shape services to meet local needs. PCTs will work closely in partnership with local authorities and a range of other organisations. Within the reformed framework lie opportunities for a range of partnerships to deliver wider social and economic regeneration with organisations such as the Forestry Commission.

The timeliness of this publication in advocating opportunities for increasing physical activity is emphasised by the National Health Service opening its first clinic to deal with the crisis of child obesity (Revill, 2002). The need for a large section of the population to take moderate exercise is pressing and forests/woodlands provide one of a number of types of locations for this to take place.

The discussions in the workshops were wide ranging. Box 4 provides a checklist of action points that health and environment professionals (often in partnership) can do to improve the way that we think about health and well-being.

Box 4 | **Action points to improve health and well-being in relation to trees, woodlands and natural spaces.**

- Make access easier and more welcoming.
- Give people a sense of ownership.
- Involve communities in decisions about creating and managing green space.
- Design environments to cater for different socio-economic groups, age groups, levels of mobility and interests.
- Encourage variety in green space, e.g. from managed to wild.
- Encourage childhood use of woodlands. Research suggests that children who visit and enjoy outside places grow into adults who do likewise.
- Locate new natural spaces as part of the environment where people live and work.
- Use art and design to make forests more accessible.
- Make environments challenging but not threatening.
- Identify and change rules that work against joint decision-making.
- Encourage the use of natural spaces as a matter of policy.
- Improve National Health Service landholdings to provide a better environment for patients, and a resource for the local community.



References

- Burne, Jerome. (2001). The healing power of trees. *Tree News*, Autumn/Winter 2001, 52–54.
- Burns, S., Boyle, D. and Krogh, K. (2002). *Putting the life back into our health services: Public involvement and health*. New Economics Foundation, London. <http://www.neweconomics.org>
- Clark, G. (1997). Health and poverty in rural Scotland. *Health Bulletin* **55**, 299–304.
- Countryside Agency (2000). *Evaluation of a health walks scheme*. Research Note No. 6. The Countryside Agency, Cheltenham.
- Countryside Agency (2001). *Better mental health from the countryside*. A report for the Countryside Agency, Cheltenham.
- Curtis, S., Cave, B. and Coutts, A. (2002). Is urban regeneration good for health? Perceptions and theories of the health impacts of urban change. *Environment and Planning C: Government and Policy* **20**, 517–534.
- Hartig, T., Book, A., Garvill, J., Olsson, T. and Garling, T (1996). Environmental influences on psychological restoration. *Scandinavian Journal of Psychology* **37**, 378–393.
- Henwood, K. (2001). *Exploring linkages between environment and health: is there a role for environmental and countryside agencies in promoting benefits to health?* Unpublished report to the Forestry Commission, February 2001.
- Kuo, F. E. and Sullivan, W. C. (2001). Environment and crime in the inner city: does vegetation reduce crime? *Environment and Behaviour* **33**, 343–367.
- More, T. A. (2002). 'The parks are being loved to death'. And other frauds and deceits in recreation management. *Journal of Leisure Research* **34**, 52–78.
- National Centre for Chronic Disease Promotion and Health Promotion (2002). *Promoting physical activity through recreation in America's great outdoors*. <http://www.cdc.gov/nccdphp/dnpa/physical/partnership.htm>
- O'Brien, E. (2003, in prep.). *Social and cultural values of woodlands and trees in northwest and southeast England*. Unpublished report to the Forestry Commission.
- Revill, J. (2002). NHS wakes up to child obesity crisis: clinic to help overweight children could be first of many. *The Observer*, 19 October 2002.

Rhode, C. L. E. and Kendle, A. D. (1994). *Human well-being, natural landscapes and wildlife in urban areas: a review*. English Nature Science Report No. 22. English Nature, Peterborough.

Robinson, N. (1992). Healing with nature. *Landscape Design* June, 29–31.

Siegrist J. (2000). The social causation of health and illness. In: *The handbook of social studies in health and medicine*, eds G. Albrecht, R. Fitzpatrick and S. Scrimshaw. Sage Publications, London/Thousand Oaks, New Delhi, 100–114.

Sullivan, W.C. and Kuo, F. E. (1996). *Do trees strengthen urban communities, reduce domestic violence?* Forestry Report R8-FR 56. USDA Forest Service, Atlanta.

Ulrich, R. S. (1986). Human responses to vegetation and landscapes. *Landscape and Urban Planning* **13**, 29–44.

USDA Forest Service (2001). *Trees for children: helping inner city children get a better start in life*. Technology Bulletin No. 7. USDA Forest Service, Northeastern Area. Pennsylvania.

Wilson, M. (1976). *Health is for people*. Darton, Longman and Todd Ltd, London.

Williams, A., ed. (1999). *Therapeutic landscapes: the dynamic between place and wellness*. University Press of America, Oxford.

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There is a growing understanding in health policy that sustainable health requires not only effective medical approaches, but also healthy environments and lifestyles. This is the idea of well-being, something more than just the absence of illness. Contact with nature can extend a positive influence on the physical and mental health of humans particularly in urbanised societies. Forests and green areas can provide an escape from stress.

Woodlands also offer a locus for community action, a meeting place, and a location that often forms an important aspect of local identity.

This publication provides synopses of presentations and workshop discussions from three expert consultations held on *Health and Well-being: Trees, Woodlands and Natural Spaces* in Scotland, England and Wales in 2002. The events provided a forum for a variety of organisations to:

Discuss and examine the relationship between the environment, health, culture and society.

Develop communication networks of environmental and health professionals, administrators and researchers.

Build mutual understanding among the above target groups.

The wide-ranging discussions and workshop themes presented here provide a valuable set of opinions and a substantial basis for the discussion of future partnerships, networks and projects.

