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Britain's trees, woodlands and forests: linking  
ecosystem services with human wellbeing

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**FRESH SEMINAR: ECOSYSTEMS SERVICES AND SUSTAINABLE  
COMMUNITIES**

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services with human wellbeing

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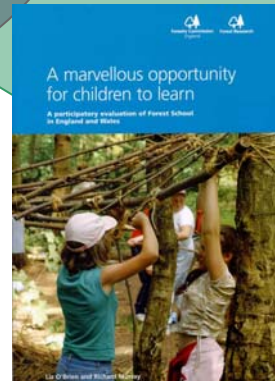
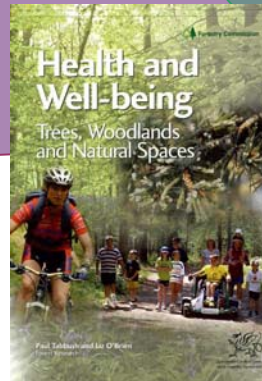
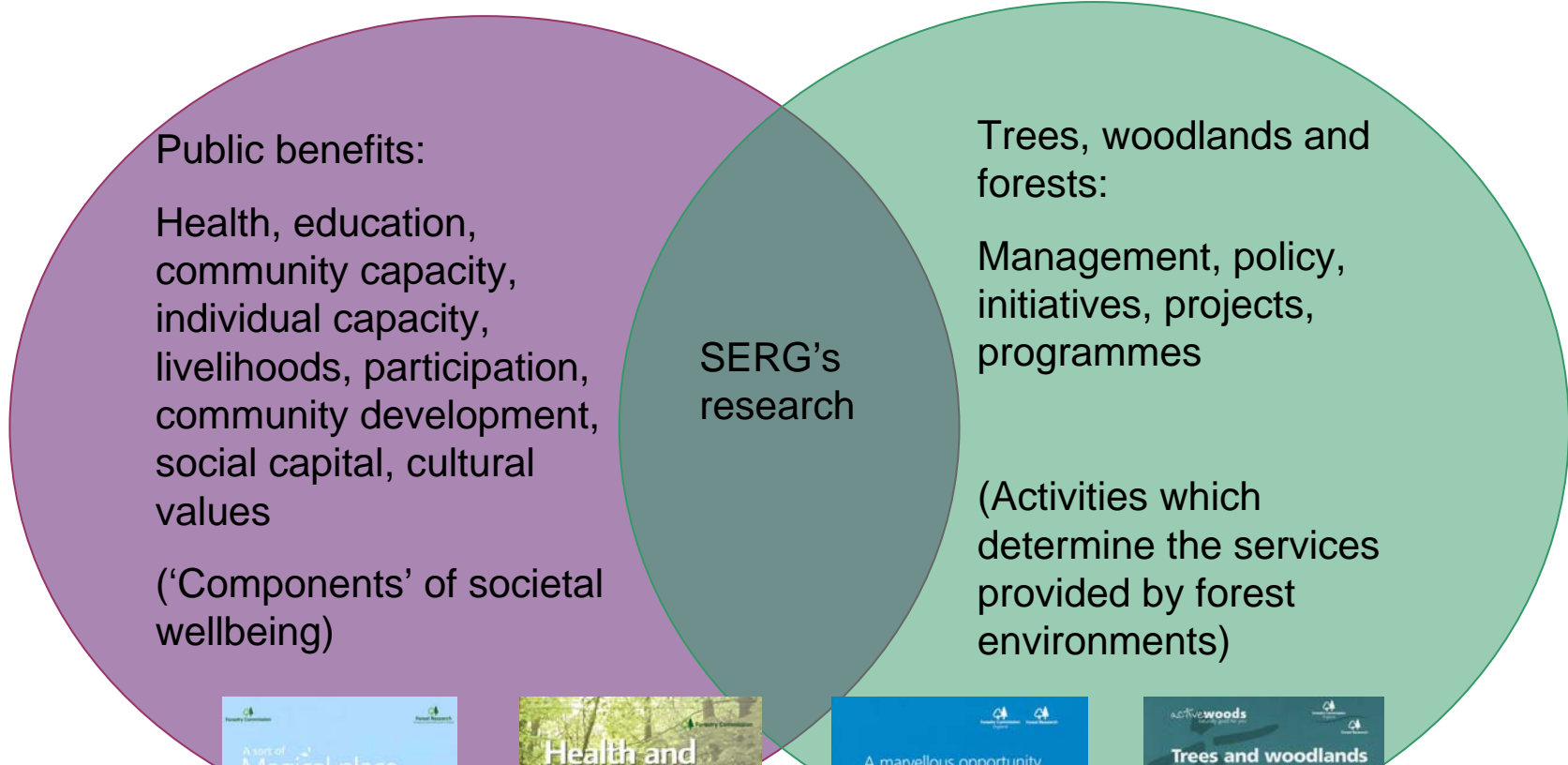
# Content:

- Motivations / interests (Jake)
- Wellbeing – definitions & UK policy overview (Liz)
- 2 projects that illustrate linkages:
  - M&E for ETWF (Jake)
  - Environmental volunteering (Liz)
- Key reflections / challenges (Jake & Liz)
- Questions for discussion (Jake & Liz & all)

# Why did we want to talk today?

- Address 'disconnect' between the 2 central FRESH concepts:
- Growing policy & academic literature on wellbeing, but little linkage with the natural environment (e.g. 2005 Quality of Life indicators – only 2/45 indicators refer to the natural environment)
- Growing policy & academic literature on ecosystem services, but predominantly technical focus on functioning of natural environmental systems. WB dimension often assumed or implicit.
- Disconnect evident in two distinct languages of ES and WB literatures (reflected in disciplinary specialisation & specialist indicator sets)
- Disconnect evident in research / forest management & planning within FC

# SERG & post-productive / multi-functional forestry



## What is well-being?

- 'Wellbeing is a positive physical, social and mental state; not just absence of pain, incapacity, discomfort. It requires that basic needs are met, that individuals have a sense of purpose, that they feel able to achieve important personal goals and participate in society.

- It is enhanced by conditions that include supportive personal relationships, strong and inclusive communities, good health, financial and personal security, rewarding employment, and a healthy and attractive environment'.

### Components of WB

<u>MEA</u>	<u>Layard</u>	<u>SERG</u>
Security	Family	Livelihoods
Basic materials	Work	Health
Health	Community and friends	Community capacity
Good social relations	Health	Culture and landscape
Freedom and choice	Freedom	Education
	Values	Participation

DEFRA and cross government department common understanding of well-being 2008

## How is well-being studied?

- Subjective well-being
  - Hedonic – life satisfaction, presence of positive mood (happiness), absence of negative mood
  - Eudaimonic – control over life (autonomy), functioning effectively (competence), positive interactions with others (relatedness)
- Objective well-being
  - Material and social attributes – income (GDP), education, health care etc (important for society's welfare)

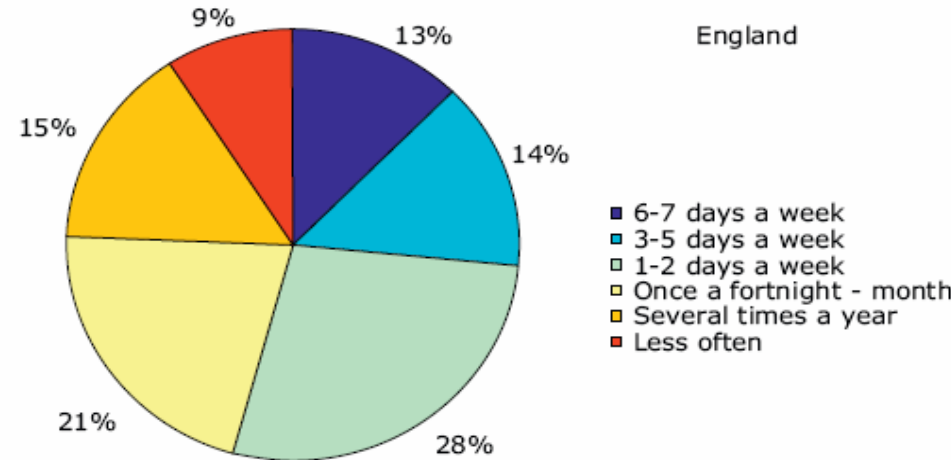
## Policy Context

- Local Gov Act 2000 and Local Gov in Scot Act 2003 – power to advance well-being of areas or people. For example:
  - Tackling social exclusion
  - Promoting sustainable development
  - Improving physical and mental health
  - Improving biodiversity
- Sustainable Development Strategy 2005 included WB measures e.g. education, social justice. New measures include life satisfaction, child WB, green space, cultural participation, positive mental health
- Audit Commission, DEFRA, ODPM published local quality of life indicators in 2005
- 2007 New National Indicator Set for LA's (198 Indicators) – environmental sustainability section – improved local biodiversity, cleanliness of environment, waste control

WB is a UK framework indicator – shared by UK Gov and devolved administrations

It includes 12 existing SD indicators and new measures to the WB indicator

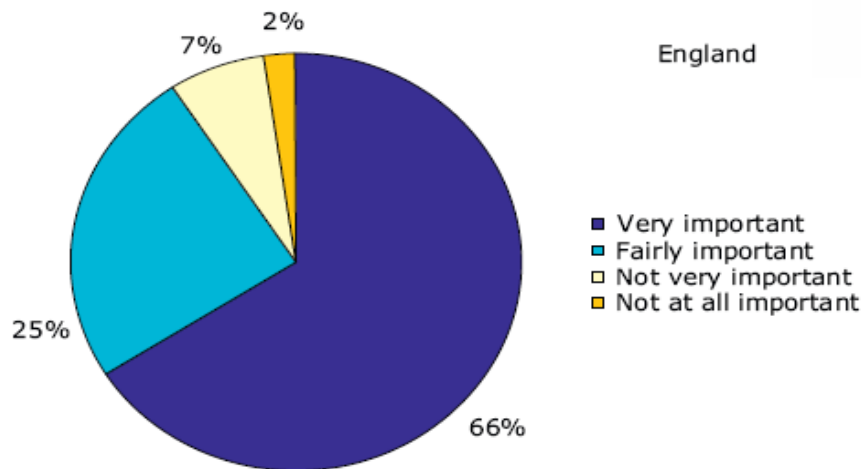
Frequency of green space use, 2007



Source: Defra

- Twenty-seven per cent of people visited green space 3 or more times a week. 24 per cent visited less than once a month.

Importance of green space, 2007



Source: Defra

- Over 90 per cent of people thought that it was very or fairly important to have green spaces near to where they live

Sustainable development indicators in your pocket 2008 - Update

# Monitoring & Evaluating 'A Strategy for England's Trees, Woods & Forests' (ETWF)

- Guiding principles for management of TWF over next 10 years:

Public forest estate & privately owned

- Split into three 'themes' (Environmental / Social / Economic):

'Land & Natural Environment'

'Community & Places'

'Working Woodlands'



## Objectives of ETWF's C&P theme:

- Greater public participation in the planning, management and use of trees, woodlands, forests;
- More integrated & inclusive communities;
- Greater awareness of individuals to environmental sustainability + increased environmental activity;
- Healthier people (mentally & physically);
- Improved learning opportunities (organised / formal & unorganised / informal);
- Enhanced cultural values;
- Increased opportunities for personal development and community capacity building;
- Greater resilience to effects of climate change
- Improve quality of place

Aspects of societal wellbeing ('QOL') to be derived through interaction with TWF

Refers to qualities of physical environment ('QOP') that are enhanced by TWF

# C&P theme of ETWF & FCE's Corporate Plan 2008 – 11

## ETWF Aim 4:

'increase the contribution that TWF make to quality of life'

### FCE's corporate objectives:

- to create better places through well-wooded green infrastructure
  - to build active, stronger and sustainable communities
  - to encourage healthier, happier and interested individuals

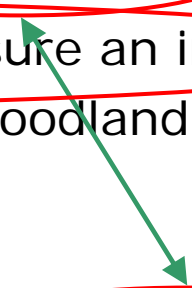
### FCE's corporate measures of success:

Target 1: Increase the percentage of the population in priority areas with access to woodland as an indicator of Quality of Place.

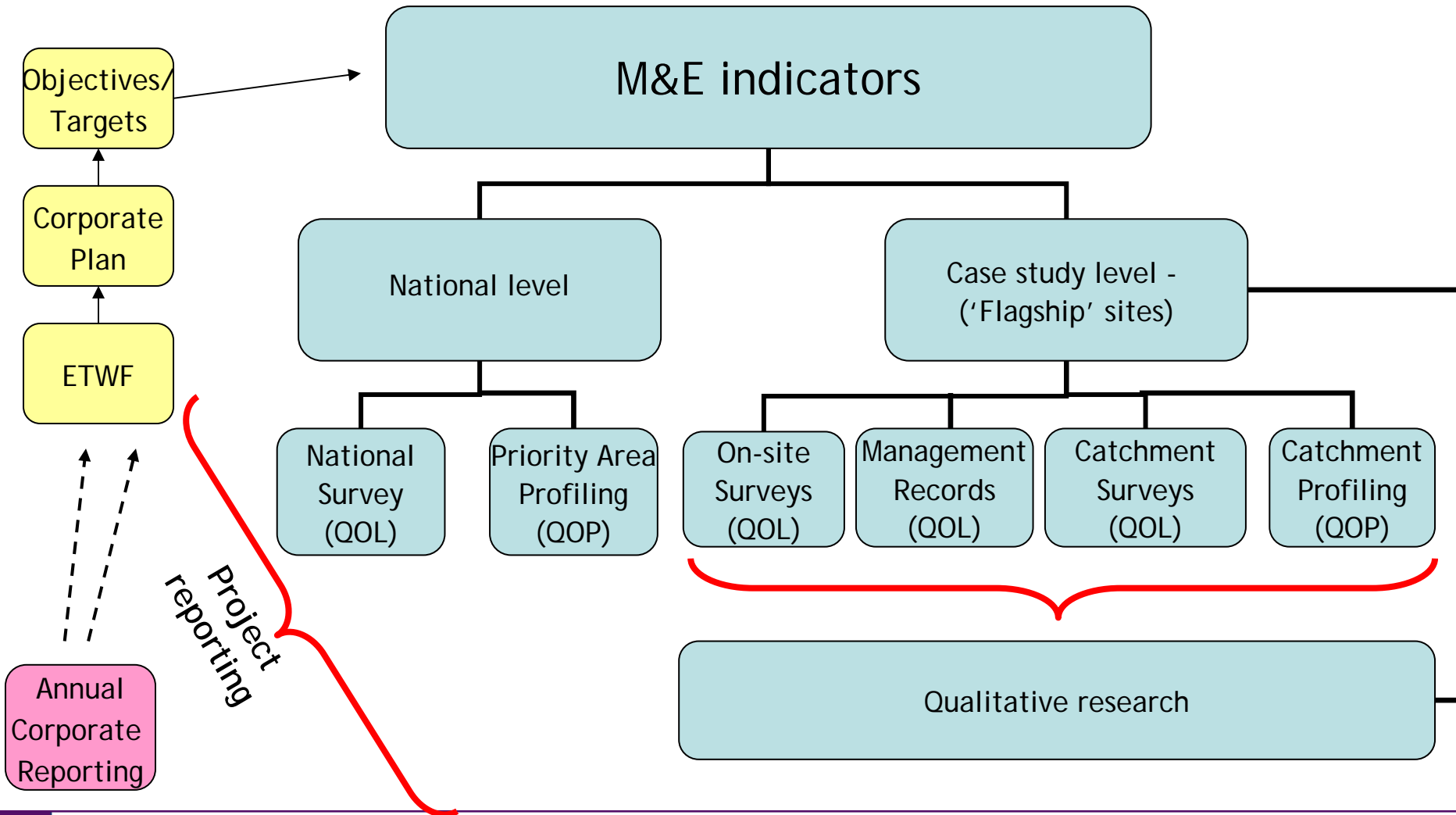
Target 2: Develop a methodology, set a target, then measure an increase in:

- visits to and engagement with local woodland;
  - quality of experience; and
  - personal and social benefit

as an indicator of woodlands' contribution to Quality of Life.



# Project structure



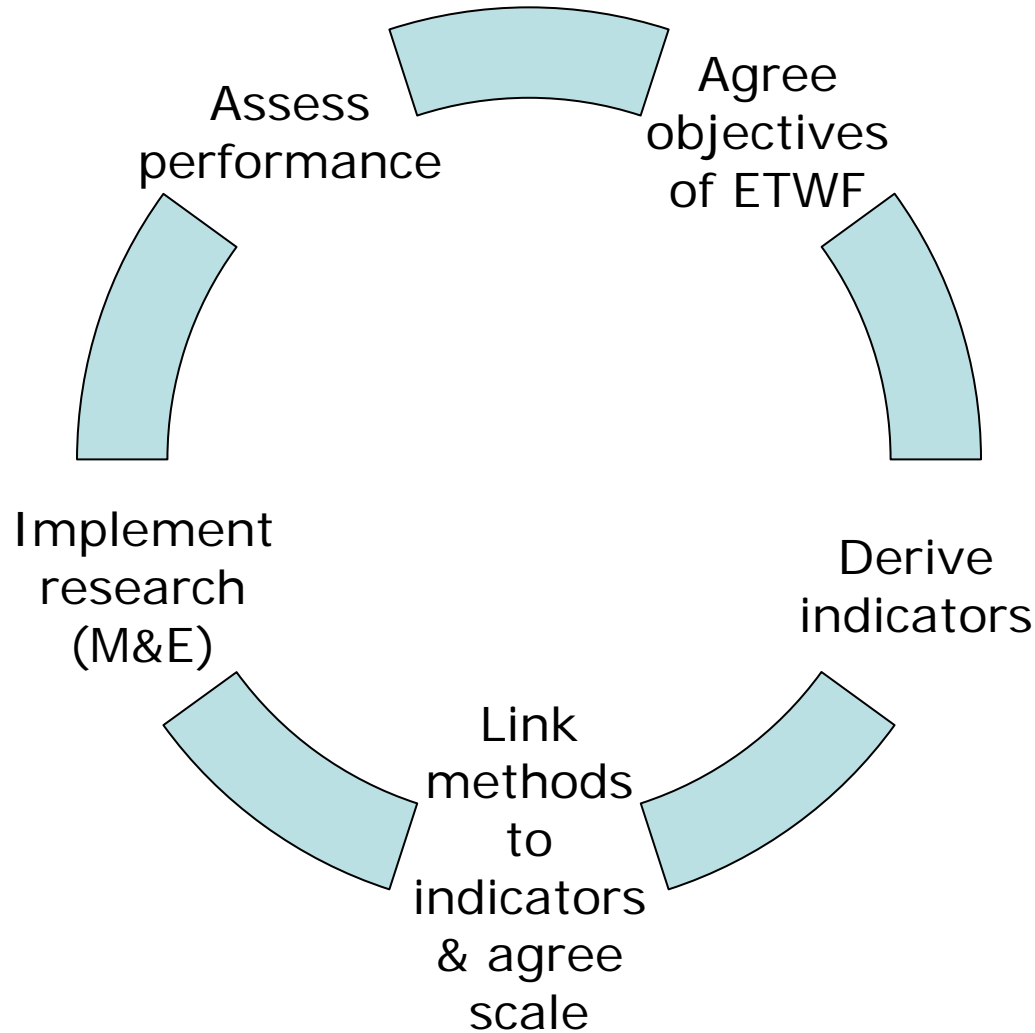
# M&E methods for Quality of Life

<b>Method</b>	<b>What will it tell us?</b>
National survey	Visitor profile – demographics
On-site surveys	Visit profile – frequency, activities
Catchment surveys	Benefits profile – individual / community  QoE – would they recommend the site to others?
Site management records	Visitor / User profile – number / demographics Visit / Use profile – frequency, activities Benefits profile – individual QoE – would they recommend the event to others?
Qualitative research	Individual / community development outcomes Barriers Participatory research Institutional change Improved service delivery

## M&E methods for Quality of Place

Method	What will it tell us?
Spatial analysis of priority areas & accessible woodland	% of population (PA) with access to woodland
Spatial profiling of case study catchments	Demographic characterisation of catchment populations
Comparison between visitor profile & catchment profile	Who is under-represented? (informs targeted qualitative research e.g. barriers)

# Project process:



# From ETWF objective to indicators

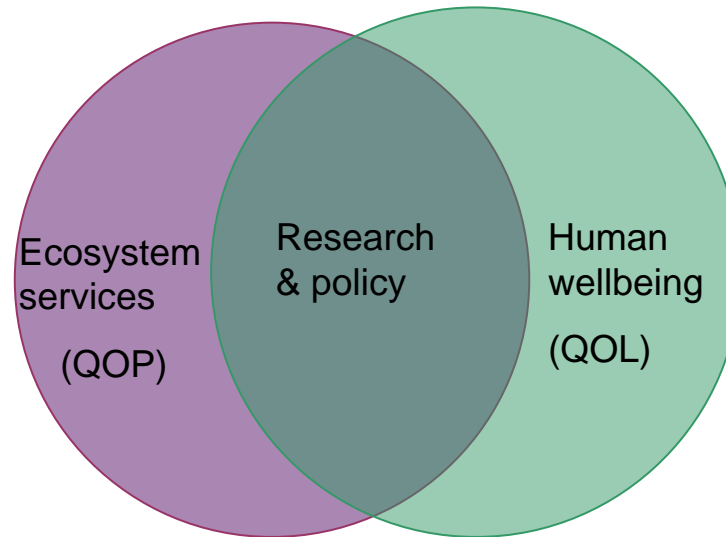
<b>ETWF objective</b>	<b>Indicator</b>
Improved learning opportunities	<b>Monitoring</b> Number of events / initiatives using TWF to promote learning
	<b>Monitoring</b> % population (national & catchment) involved in formal TWF-based learning events / initiatives
	<b>Monitoring</b> % population (national & catchment) involved in informal TWF-based learning activities
	<b>Evaluation</b> Extent to which involvement in organised and unorganised learning contributes to individual & community development

# From indicators to methods

<b>ETWF objective</b>	<b>Indicator</b>	<b>Scale / method</b>
Improved learning opportunities	<b>Monitoring</b> Number of events / initiatives using TWF to promote learning	<b>Site level</b> Site management records
	<b>Monitoring</b> % population (national & catchment) involved in formal TWF-based learning events / initiatives	<b>Site, catchment &amp; national level</b> Catchment & national surveys Site management records
	<b>Monitoring</b> % population (national & catchment) involved in informal TWF-based learning activities	<b>Site, catchment &amp; national level</b> Catchment & national surveys On-site surveys
	<b>Evaluation</b> Extent to which involvement in organised and unorganised learning contributes to individual & community development	<b>Community / individual level</b> Focus groups / interviews / participant observation

# From research design to implementation

<b>ETWF objective</b>	<b>Indicator</b>	<b>Scale / method</b>	<b>Implementation</b>
Improved learning opportunities	<b>Monitoring</b> Number of events / initiatives using TWF to promote learning	<b>Site level</b> Site management records	Select case studies Develop proformas for on-site data capture Develop database
	<b>Monitoring</b> % population (national & catchment) involved in formal TWF-based learning events / initiatives	<b>Site, catchment &amp; national level</b> Catchment & national surveys Site management records	Define site catchments Conduct catchment surveys Develop proformas for on-site data capture Conduct national surveys
	<b>Monitoring</b> % population (national & catchment) involved in informal TWF-based learning activities	<b>Site, catchment &amp; national level</b> Catchment & national surveys On-site surveys	Define site catchments Conduct catchment surveys Conduct national surveys Conduct on-site surveys
	<b>Evaluation</b> Extent to which involvement in organised and unorganised learning contributes to individual & community development	<b>Community / individual level</b> Focus groups / interviews / participant observation	Identify individuals / groups Conduct fieldwork



## Linking ecosystem services (QOP) with human wellbeing (QOL): Reflections and challenges

1. Social & environmental inequalities – the issue of distribution

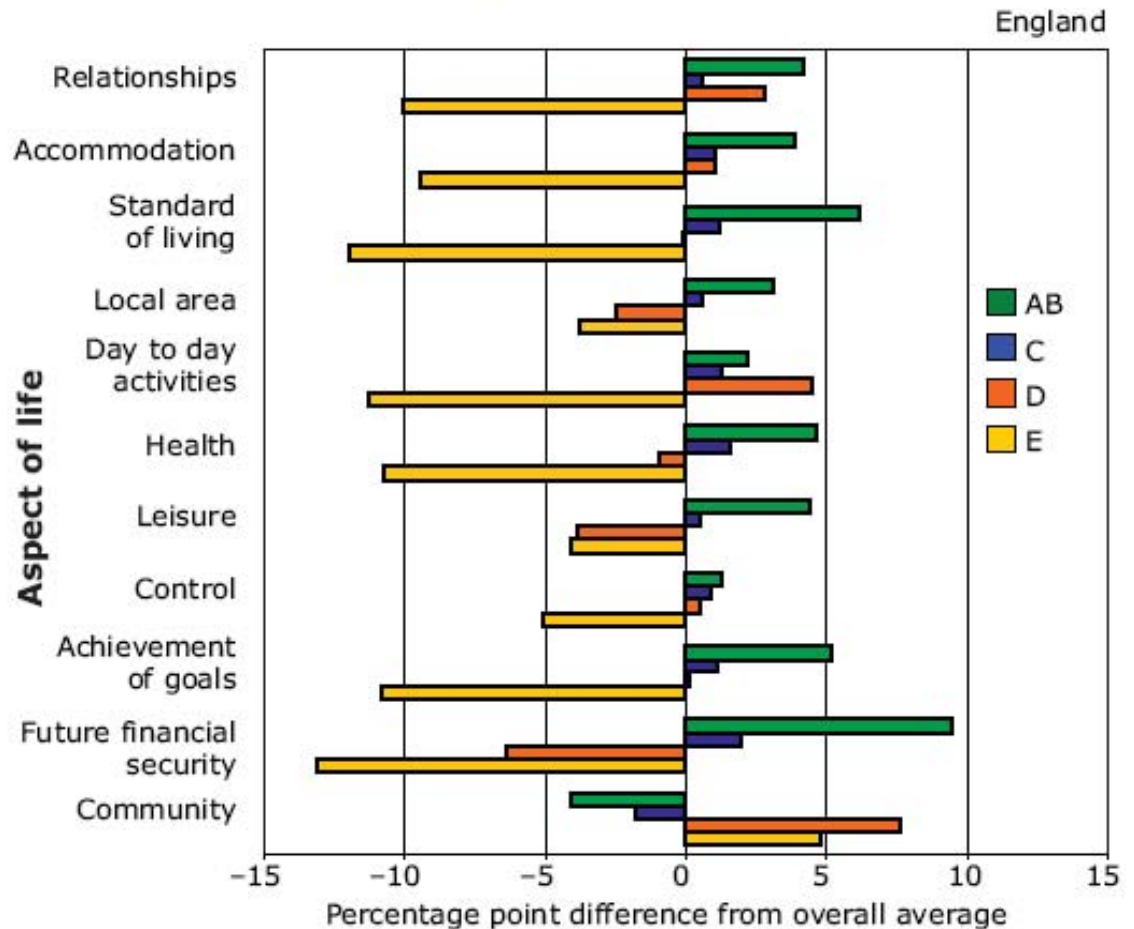
(d) Satisfaction with aspects of life, by social grade

Percentage of people fairly or very satisfied with selected aspects of life, by social grade, 2007

Social inequalities:

For most aspects of life proportions of people in group AB who were satisfied were higher than other groups

Conclusion: wellbeing is unequally distributed across society



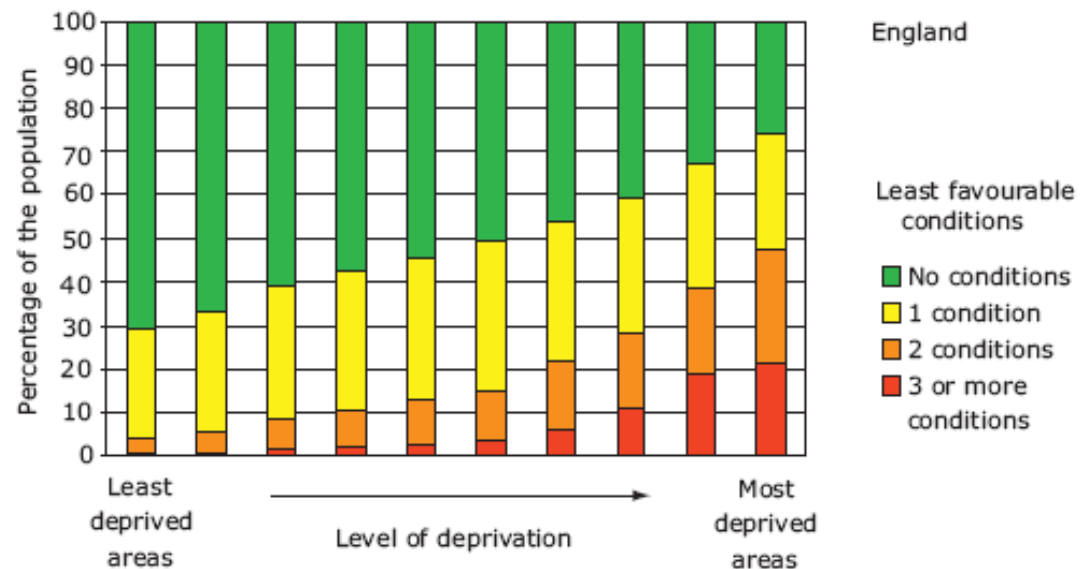
## Environmental inequalities:

A higher proportion of people in the most deprived areas in England may live in areas with multiple environmental conditions that are in relative terms the 'least favourable', compared with populations living in less deprived areas.

Conclusion: Ecosystem services are unequally distributed across society

## 60. Environmental equality

Populations living in areas with, in relative terms, the least favourable environmental conditions, 2001-6



## FCE – Assumption of causal link between QOP & QOL

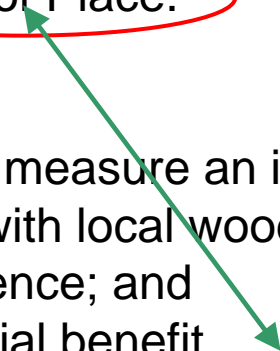
FCE's corporate measures of success:

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as an indicator of woodlands' contribution to **Quality of Life**.



# Inequality & access

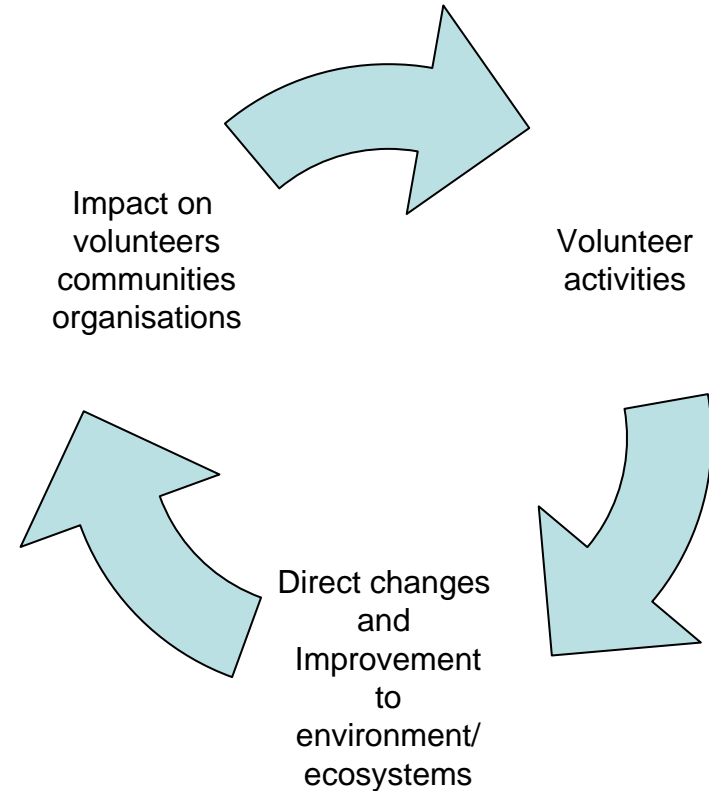
- Assumption of simple causal link between QOP & QOL
- Assumption that 'availability' of TWF = wellbeing benefits
- Spatial definition of 'accessible' (proximity)
- BUT accessibility is socially as well as spatially defined
- Is 'availability' enough for hard-to-reach groups?
- Need for sophisticated analysis of access to include socio-economic & cultural barriers



## Environmental volunteering research project

### Policy context

- Financial - increased funding for volunteering from government, new programmes to encourage volunteering – ‘V’, ‘Do-it’, ‘GoldStar’, ‘Volunteering for All’
- Social - active citizenship, inclusion, community cohesion, education and training, health and wellbeing
- Environmental - biodiversity targets, climate change - pro-environmental behaviour, local improvement of green spaces



## Exploration of motivations and benefits

- Hands on engagement with nature
- Practical activities – tree thinning, footpath repairs, habitat creation, removal of invasive species
- Study in northern England/southern Scotland
- On site with volunteers across 10 different groups (88 volunteers and 26 organisation staff)

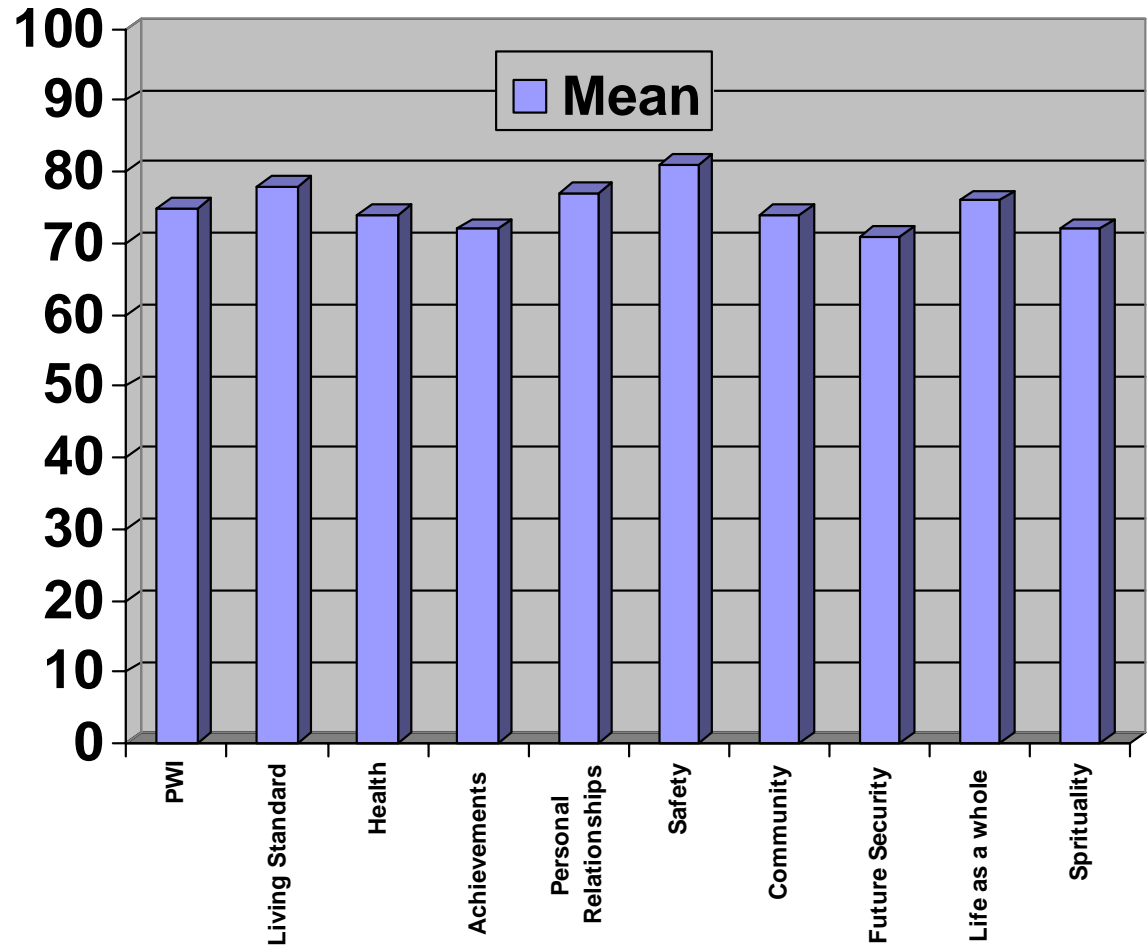


Quantitative data collection

Personal well-being index

No gender differences found across the different factors

On average the volunteers were very satisfied with life



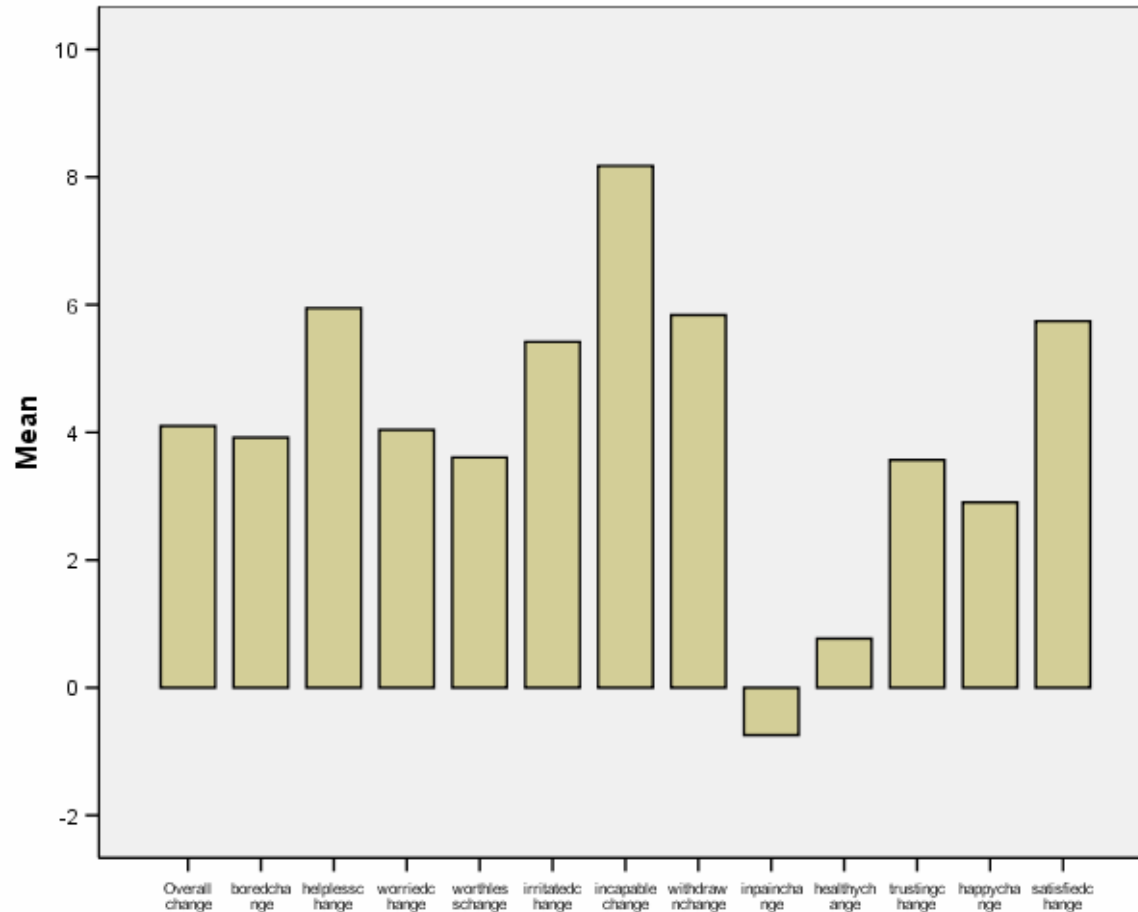
## Emotional state scale (ESS)

Scale indicates change in emotional state across 12 parameters e.g.  
 happy/unhappy  
 bored/interested  
 worthless/worthy

Scale used before and after volunteering activity

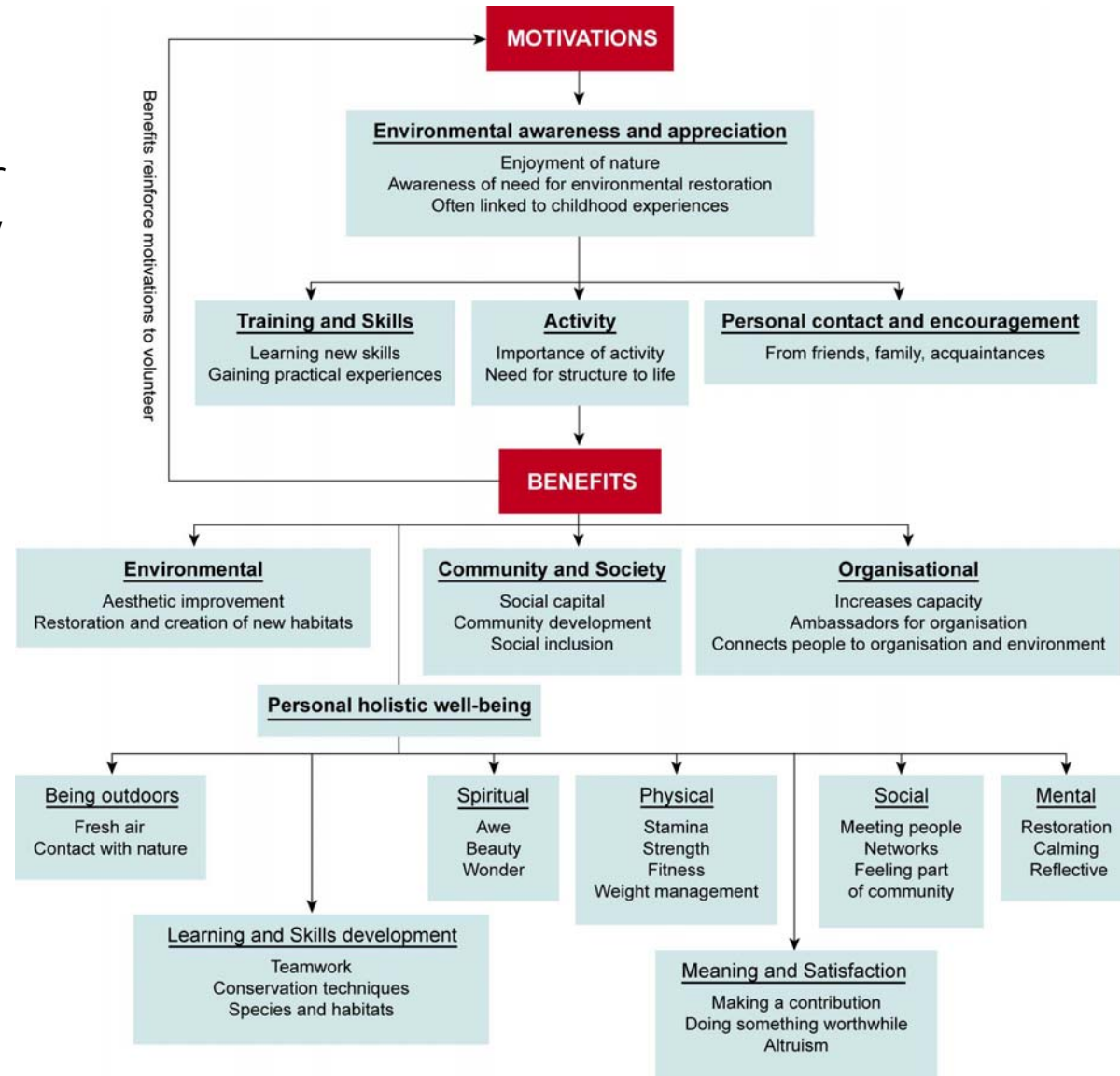
Change from 68.6 out of 76 before to 72.3 after. Mean difference 3.7  $p < 0.001$

Only negative increase was pain. Interviews with volunteers highlighted that pain was not seen negatively by volunteers

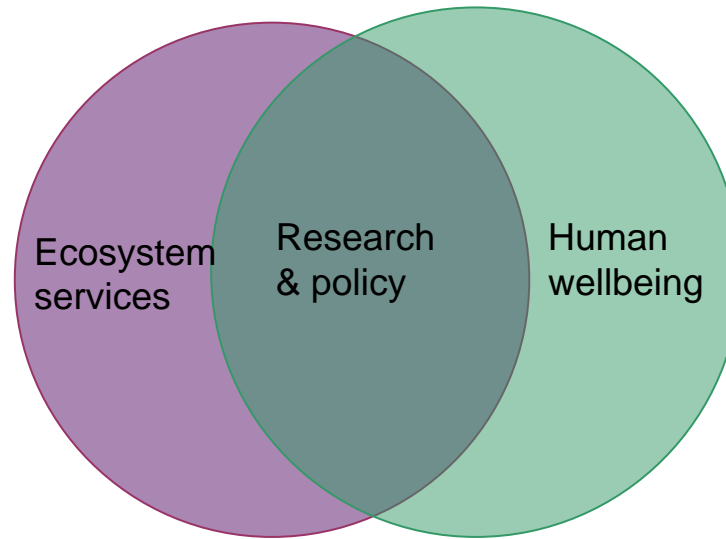


Interviews on site with volunteers highlight benefits to well-being for volunteers, benefits they see for environment and society

Organisations that manage volunteers also highlighted benefits to environment and wider society as well as well-being benefits to volunteers



<b>Level of engagement</b>	<b>What is involved</b>	<b>Potential benefits</b>
Level 1 – Existence	Knowing they exist for others	Mental WB (Individual)
Level 2 – Virtual access	Virtual or mental image – TV, memory	Mental WB (Individual)
Level 3 – A view	View from window, car or walking by	Mental WB (Individual)
Level 4 – Use and being in	Cycling, walking, picnicking, sitting	Physical, mental and social WB (Individual and collective)
Level 5 – Active ‘hands on’ engagement	Practical hands on work	Physical, mental and social WB (Collective)
Level 6 – Participation in decision-making	Involved in creation or design or management	Social and mental WB (Collective)
Level 7 – Ownership and or management	Involvement and responsibility	Physical, mental and social WB (Collective)



## Linking ecosystem services with human wellbeing: Reflections and challenges

### 2. The information demands of policy versus

people's actual experiences of the natural environment

## INFORMATION DEMANDS OF POLICY

**Reductionist and generalisability** - Policy drive for national indicators to meet targets – NIS/PSA - focus on quantitative data, generalised to the population level nationally

**Recipe lists** – indicators, components, services and functions

## PEOPLE'S EXPERIENCES

**Relational** – relationships with environment developed throughout life, understanding and responding to local needs. Connected nature of wellbeing benefits (e.g. people do not separate health from socialising, they do not separate benefits but talk about them as part of everyday experience). Different experiences at different levels of engagement

**Context and situation specific** - Recognised by MEA (2003) 'The constituents of well-being as experienced by people are situation dependent, reflecting local geography, culture and ecological circumstances'

**Conclusion** – need to look at specific contexts of encounters between people + environment BUT recognise tension with policy language of indicators / targets.

- Strategic relevance for FC / FR / SERG:
- Defra's 'Securing a healthy natural environment: An action plan for embedding an ecosystems approach' stresses need for linkages (aspiration):

'The **Holistic Ecosystem Health Indicator** incorporates interacting ecological and social indicators to provide a comprehensive assessment of ecosystem health. These indicators quantify relationships between people and the ecosystem, as well as the effectiveness of regulatory agencies in implementing legislation and community perceptions, awareness of and involvement in management decisions'

'**Defra, the Environment Agency, Natural England and the Forestry Commission** to develop a strategy for convergence between indicators and targets used in different policy areas to be consistent with an ecosystems approach' (p.31)

## WB has much to offer the Ecosystems Approach

- Re-focus attention on people's experiences of natural environment not preferences
- Research to explore WB benefits of natural environment should capture subjective/objective dimensions of WB

**Conclusion** – WB provides new perspective to natural environment valuations, emphasises importance of how people think and feel about their lives.

Use of WB frameworks and methods in context of valuing environment

## Questions for discussion:

How to increase dialogue between academics, practitioners and policy makers from the WB and EA camps?

How to integrate research from WB and EA while including indicators and people's experiences?

Issues of scale – from EA perspective (habitat, species, ecosystem, catchment) – from WB perspective (local site, area, region, national)

Knowledge – how to include different types (expert/scientific, practitioner, local)