

What are the health and wellbeing impacts of participating in environmental enhancement? A theory-led systematic review

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# **Collaborators**

### **Export advisory group**

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- Project Reference Group:
- MIND,
- Natural England,
- Conservation Volunteers,
- Small Woods,
- DEFRA,
- N. Penines AONB,
- Groundwork,
- The Conservation Foundation.







- What are the health and wellbeing impacts of participation in environmental enhancement/ conservation activities?
- How do these effects come about?
- Are the impacts different for different groups of people?
- What contextual factors contribute to different impacts?







# Included studies

**Population**: Anyone voluntarily involved in conservation or environmental improvement activities or those who have taken on such tasks as part of community payback or probation schemes.

**Activity:** any outdoor, physical activity which has a conservation or environmental enhancement focus.

**Outcomes**: mental, physical, and emotional health/ wellbeing impact.

**Study designs**: Relevant comparative quantitative evidence and qualitative evidence.

In English, written after 1990, conducted in an OECD country.







### Methods

Exploration of literature and protocol development

Participation in environmental enhancement and conservation activities for health and well-being in adults (Protocol)

Husk K, Lovell R, Cooper C, Garside R

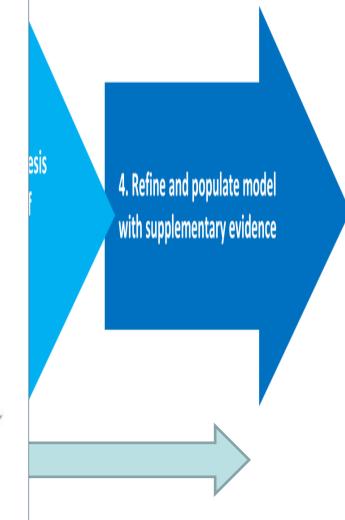


This is a reprint of a Cochrane protocol, prepared and maintained by The Cochrane Collaboration and published in The Cochrane Library 2013/plant 2

http://www.thecochranelibrary.com



Participation in environmental enhancement and conservation activities for health and well-being in adults (Protocel) Copyright © 2013 The Cochrane Collaboration, Published by John Wiley & Sons, Ltd.

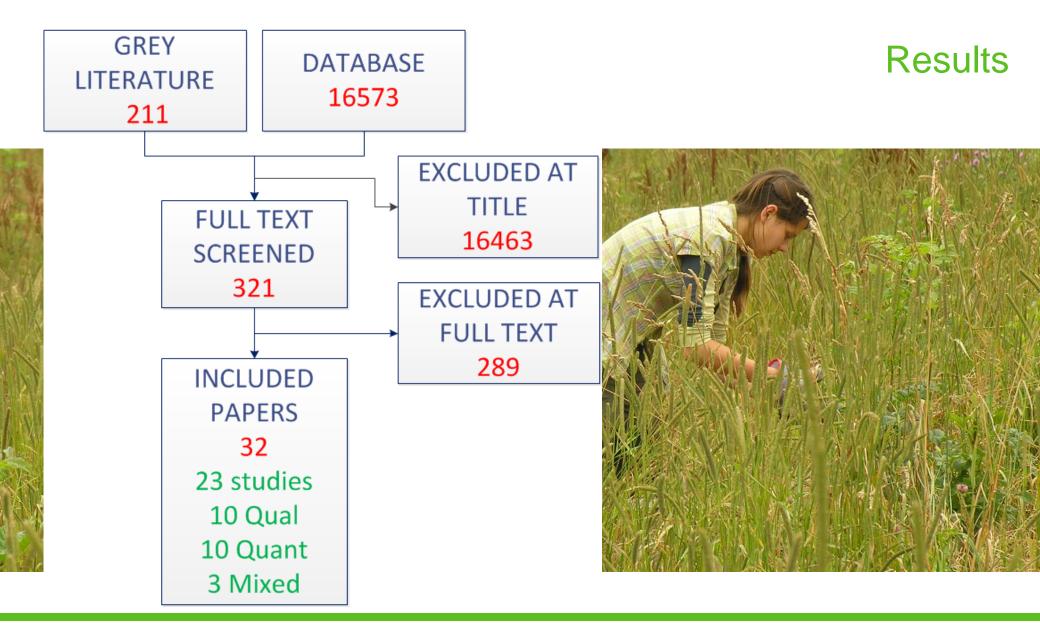


alth Research















\*Comparative design

() Domains of the SF-36/12

↑ Significant positive change

→ No significant difference

◆ Significant negative change

Objective measure or well validated scale

# Results: Quantitative

	Physiological (see Figure XX)	Physical (see Figure XX)	Mental and emotional (see Figure XX)	Quality of life (see Figure XX)	Social/physical activity (see Figure XX)
Intervention					
BTCV 2010b (N=136, uBA, Weak): UK				(→→)	
Eastaugh et al. 2010 (N=8, uBA, Weak): UK				→(→→ →)	
O'Brien et al. 2008 (N=88, uBA, Weak): UK			<b>1</b>		
Pillemer et al. 2010 (N=2630, Cohort, Moderate): Canada*			^→	1	**
Barton et al. 2009 (N=19, uBA, Weak): UK			<b>&gt;</b> >		
Reynolds 1999a (N=16, uBA, Weak): UK	>>> >>> >>> >>>			( <del>) ) )</del> <del>) ) )</del>	
Small Woods 2011a (N=7, uBA, Weak): UK				<b>→→(→</b> <b>→→→</b> <b>→→)</b>	
Townsend et al. 2005 (N=102, Case-control, Weak): Australia*			<b>↑</b> ₩→→	****	**** **** **** ****
Wilson 2009 (N=77, uBA, Weak): UK			<b>→</b>	++ (++ +++ +++)	Φ.
Yerrell 2008 (N=194, uBA, Weak): UK				<b>↑</b> Ψ	





### Results: Qualitative

A	chievement	Personal / social	Developing knowledge	Benefits of place	Social contact	Physical benefits	Physical activity	Spirituality	Mental health	Risks negatives
Birch 20 SO	cial co	ntact								
BTCV 20 " +"	s nice	feel	ina na	art of	ehm	nart	of so	ciety		X X
"It's nice feeling part of. ehm. part of society  Environment										
0'						_				
"Just even, like peace of mind as well. There's										
something about being outdoors that I think just gives										
you calmness."										
Mille					(Volur	nteer. H	alpenny	and Ca	nissie 20	003)
O'Brien et a late	er lea	ernt to	talk	about	t the v	vork v	vith			
Marsh 20 pas	ssers	s-by"							)	
Townsend Wilson 2					((	Carter a	nd O'Br	rien 2008	8) x	х







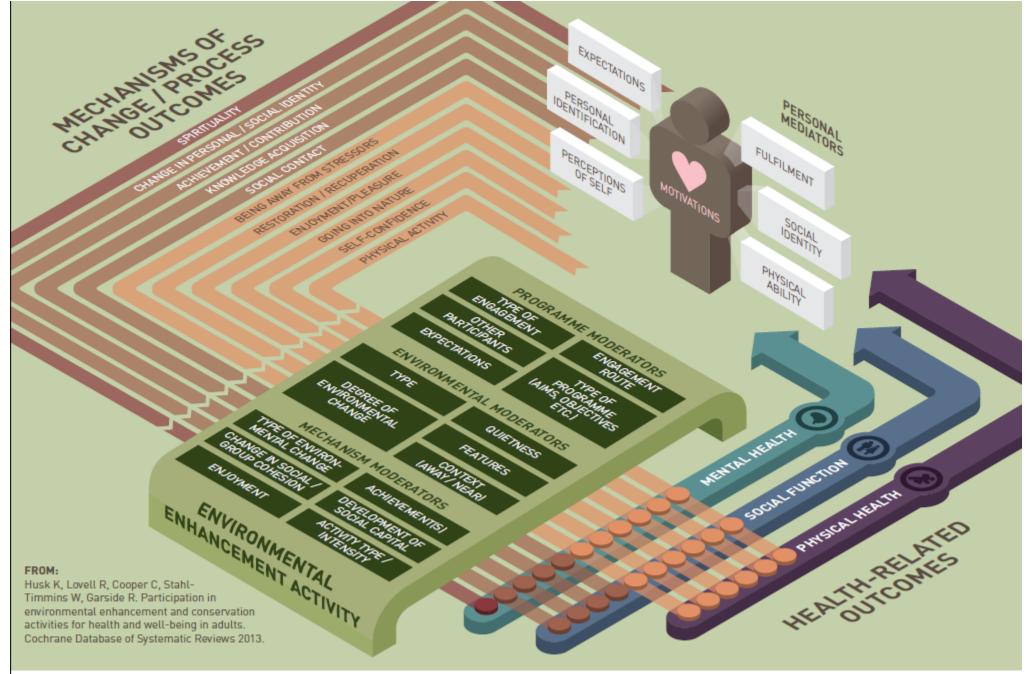




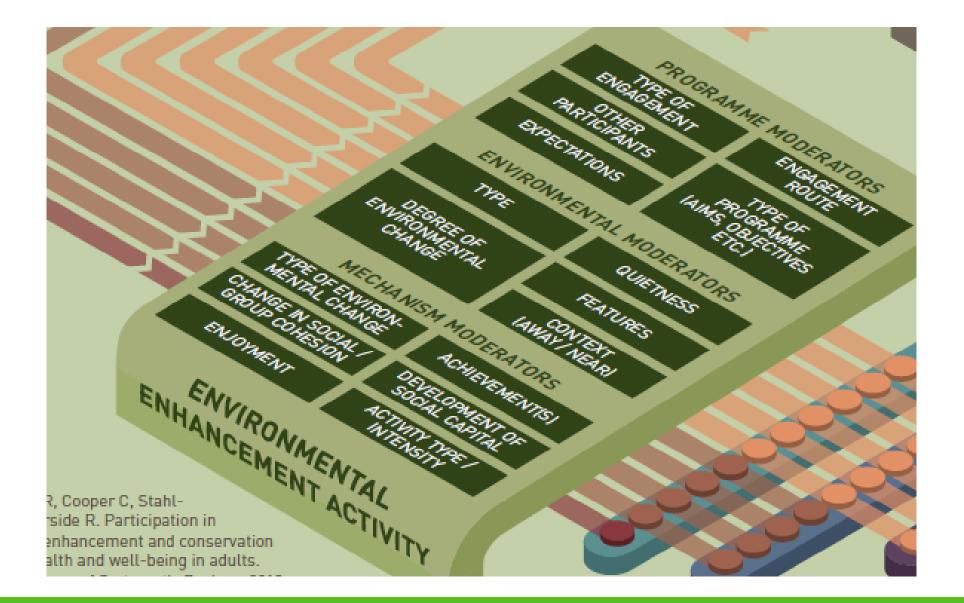




### Coing into nature pathway evidence Bectoration/recuperation pathway evidence BTCV 3010 (VIR qG) Birch 2005 (n3 of) Burti 2007 (not gMt) 8TCV 2010-1×15 (p0) Carter 2008 (n? oP) Physical activity pathway evidence Burb 2007 (+11 eM) Halpenny and Calasie 2005 (n00 qG) Sirch 2005 (n.5 oC) Halipenry and Cassie 2005 (n32 qG) theing away from stressors outliness on dence O'Sriem et al 2006 (NSS gO) 87CV 2030 (r-19 will) O'Strice et al 2010 (n10 of) Offician et al 2006 India of I Cartier 2008 (n/l off) Sirch 2005 (n.3 qG) Downsend 2006 (n/85 gM) O'Grien et al 2010 (n.10-qG) O'Brien et al 2008 (NRS q0) STCV 2010 (h09 o(0) Townsend and March 2000 (not obt) Townwend 2006 (n35-pM): Towesend 2006 (nd5 obt) Surb 2007 (x11 eVI) Wilson 2009 (x29 pG) Townsend and Marsh 2004 (v18 qM) Townsend and Marsh 2004 In LE Halperins and Calvie 2005 0130 oils Physiological outsteen evidence O'Brief et al 2006 (nBB qG) Brooker and Brooker 2008 (n.) eW) MODERATORS MEDIATORS Hope, well To wrose ed 2006 (#35 gM) but memberships of annual informed funlity Brooker and Brooker Wilson 2005 In25 p01 TWO DIE GROUP INDIVIDUAL ------------Experiations Farynolds 1999a (n15 gW) Programme Specifics. spirituality put hysay evidence tinc type of engagement) Perceitions of 8TCV 3010 (v18 qG) Personal characteristics setShipps another Burti 2007 (x11 gM) ENVIRONMENTAL finis, open...) Physical activity outcome MOTIVATIONS OUTCOMES ENHANCEMENT ACTIVITY O'Brien et al 2008 (nits oc) Social id: evidence O'Orige et al 2018 (n18-95). Pillemer et al. 2000 (x2630 qM) Spirituality: Nature of programme **Engagement** Physical 404.44 E.g. GG VS Branching out Wilson 2009 on 77 gWT health Physical Activity Achievement pathway evidence Birch 3005 (n3 q6) ENVIRONMENTAL 87CV 2010 (±19 ±6) Going into nature Mental and emotional MODERATORS Burls 2007 (n11 qM) Restoration / necessivities Type Chalamerra Barton et al. 2009 (x19) Cartier 2008 (#7 uP) Features **EMPCHANCION** Being away from sommons Chemistre 2004 re 18 edit O'Brien et al 2000 (n88 MODERATORS Mental Gooch 2005 [HSS-gM] Spirituality health Pillemer at al. 2000 (schild qM) Halpermy and Calcule 3003 (v10-yG) O'Brien et al 2008 (n88 q6) Getting out of bed Type of eav change Sowneend et al. 2005 INDO OWI O'Brien et al 2010 (#10 etc) Athievement. Achievement / contribution Withor 2009 (n77 gW) Altruism, responsibility Townsend 2006 (n35 gW) Fulliment. Townsend and Marsh 3004 (n18 gW) Tranquility Environmental improvement/change Wilson 2009 (625 oct) Secial cohesion Self confidence OOL materiors evidence Social function/ Barton et al. 2009 (x15) Social capital Self-confidence pathway evidence health Enjoymen's BRCV 2000b [n136 qW] 87CV 2030 (x19 46) Enjoyment/bleasure Buck 2007 (VID 4M) Eastwegh et al. 2010 (no. Activity type/intensity Cartier 2008 (n? qF) Personal/secial of I'my place in the world') Filterier at al. 2000 (x7680 gM) Gooch 2005 [n85 qW] Reynalds 1999a Jn15 qW1 Helperey and Calcole 2003 In LO-gG1 Enowledge acquisition/ (skills, employability, env knowledge) Small Woods 2015a (s7 O'Brien et al 2008 0488 o(0) Social Contact C'Brien et al 2010 (x10 etc. Townsend et al. 2005 (x102 gW) Townsend 2006 (x85 aVI) Yerrell 2008 (nd 84 p88) Townsend and Marsh 2006 (n18 qW) Enjoyment pleasure pathway exidence Personal/Social ID path way evidence Knewledge acquaition pathway evidence Wilson 2009 (n.77 qW) Wilson 3009 (n21) (g0) Social contact pathway evidence Rey - Patternay! Sinch 2005 In5 (60) BLCA 5030 (408 40) Birth 2005 (n3 pG) Carter 1008 In Part autoom in evidence Social function outcome evidence OTEV 2010 (NAP 660) BTCV 2000 (n15-p0) Burk 2007 (st.) 6M5 Orivite 2004 (+18-e0) boxes: a - number in study Suck 2007 (V11 qM) Decech 2005 (n85 oN) Carter 2008 (n? qP) Burls 2007 (e01 ebt) Townsend et al. 2005 (x102 gW) g - quality of study Cartier 2008 (n7 qP) Of Briefs et al 2008 (HRR Carter 2008 (x1 eP) Gooch 2005 InitS-pMI) G - Good Goodh 2005 IntiS aMI O'Striem et al 2008 (n88 og) Dividue 2004 (+18 q0) M - Moderate F - Poor (quality live) Halpenny and Calcale 2003 In10 e01 Goods 2005 (off) off) O'Brien et al 2010 (n00 qG) III - Weak [quenitative] Townsend and Marsh 2004 (no.8 of4) Halpenny and Calcule 2000 (nob qG) @'8rien et al 2010 (#50 O'Brien et al 2006 (166 qG) Wilson 2009 In29 pG1 Ray - Patingage to graingeness: O'Brien et al 2010 (n10 pG) Montal health Montal health + social function Townsend 2006 (n35 gM) Physical- mental health + social function-Townsend and Marsh 2004 (nOS gM) Wilson 2009 (n29 600) Solid line - Put human . Dotted line - interacting relationships ( )



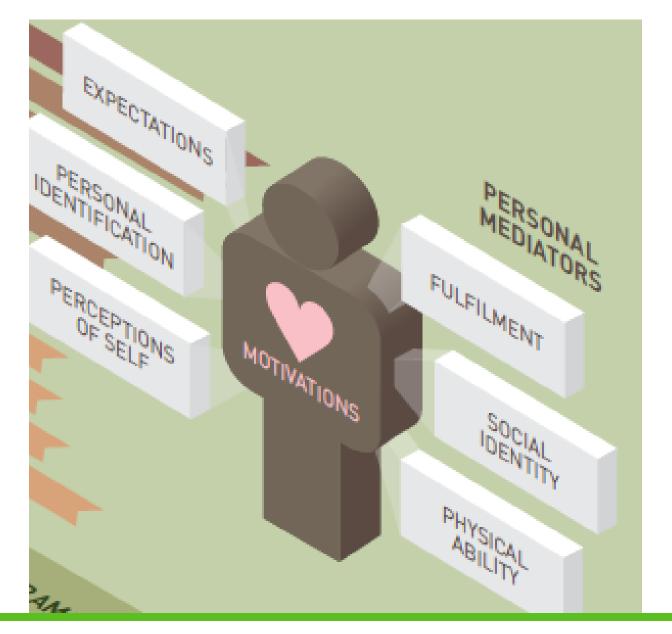
WELLBEING AND THE ENVIRONMENT: LINKING CONSERVATION ACTIVITIES AND HEALTH







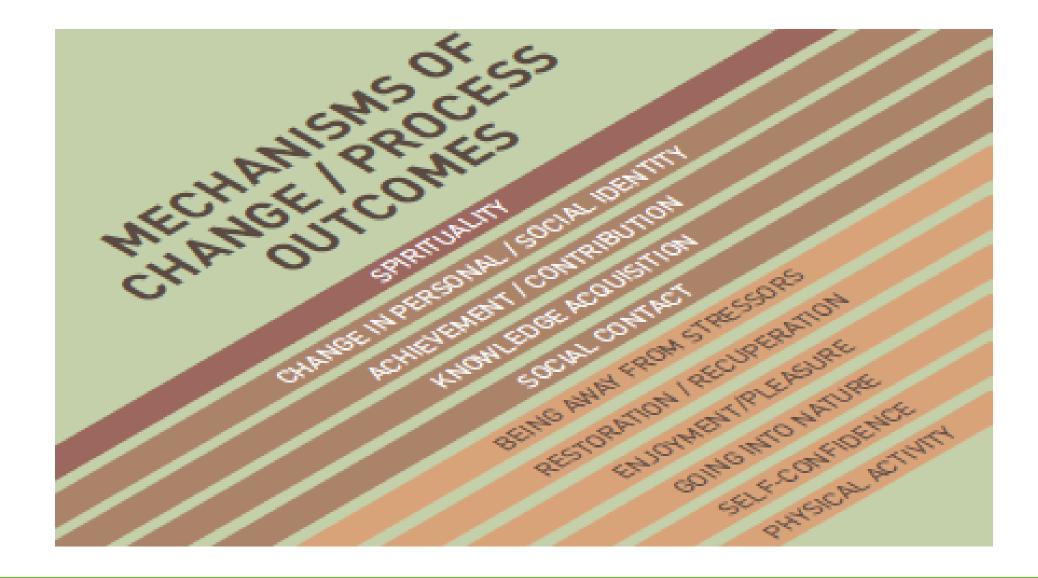








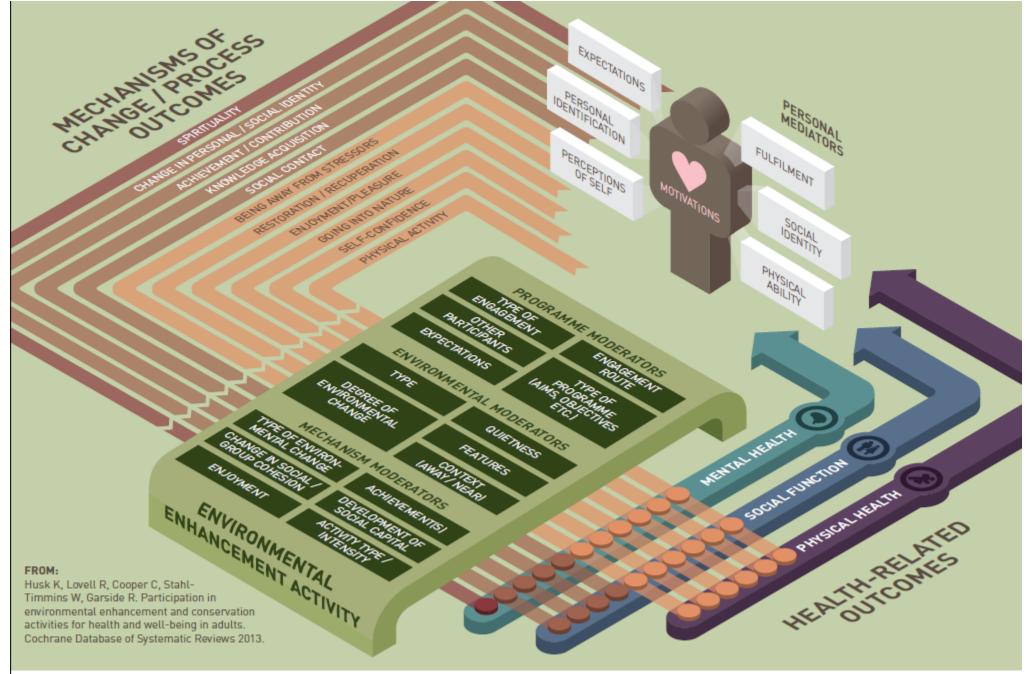












WELLBEING AND THE ENVIRONMENT: LINKING CONSERVATION ACTIVITIES AND HEALTH

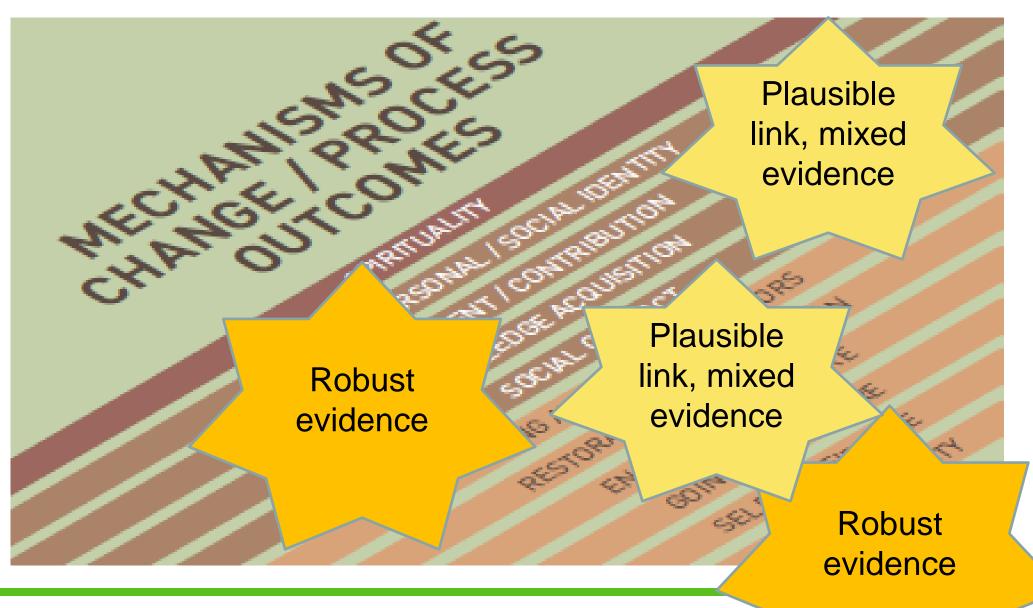
# Supporting evidence

Mechanism or process outcomes	High level evidence identified	Weight of evidence to support pathway?
Physical activity	15 systematic reviews	A significant body of reliable and robust evidence regarding the relationships between physical activity and health exists
Achievement	2 systematic reviews, 4 longitudinal studies, and 1 qualitative study	The positive link between the types of achievement and contribution described in the studies to mental and social health and wellbeing is <b>plausible</b>
Social contact	4 systematic reviews and 1 longitudinal study	Good quality, robust evidence demonstrating the health and wellbeing benefits of social contact, reduced social isolation, and of communities with greater social capital
Natural environment	6 systematic reviews	<b>Some evidence</b> to suggest that this may be a plausible pathway between the activities and health and wellbeing outcomes







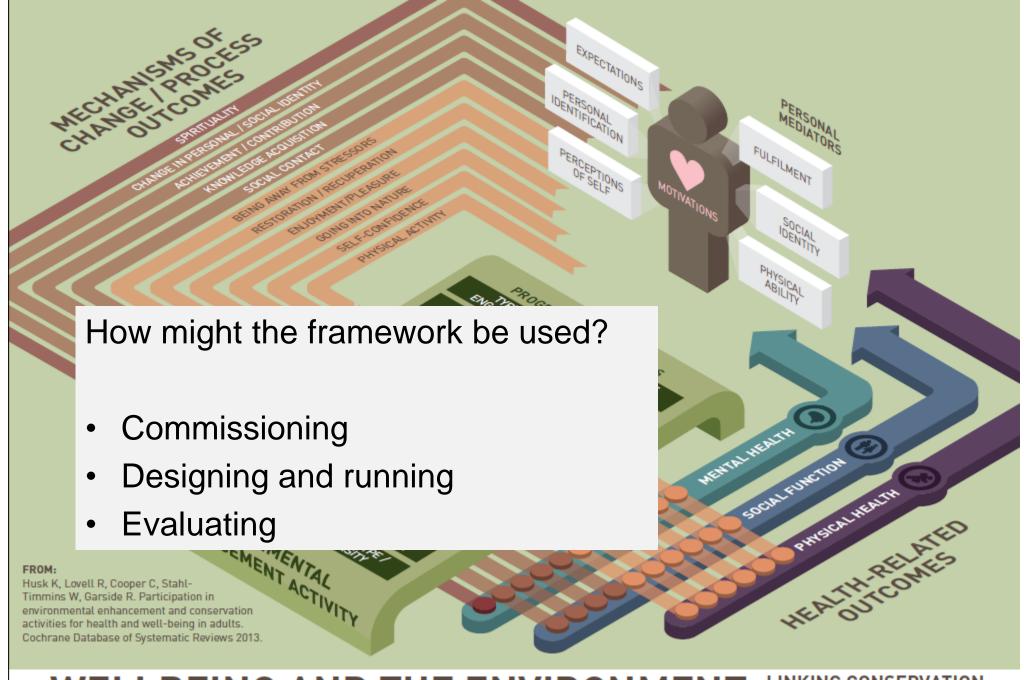












# WELLBEING AND THE ENVIRONMENT: LINKING CONSERVATION ACTIVITIES AND HEALTH







