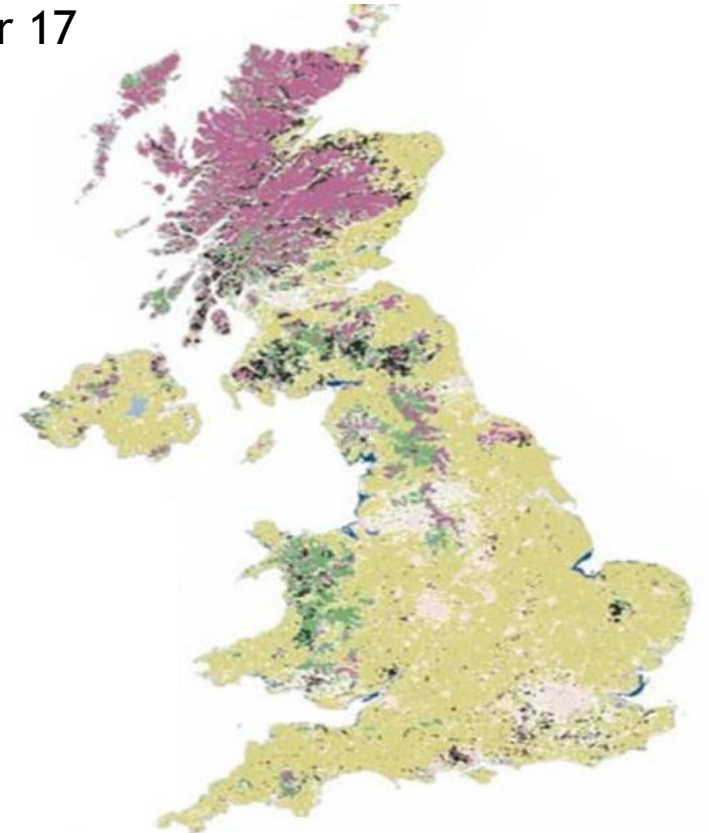
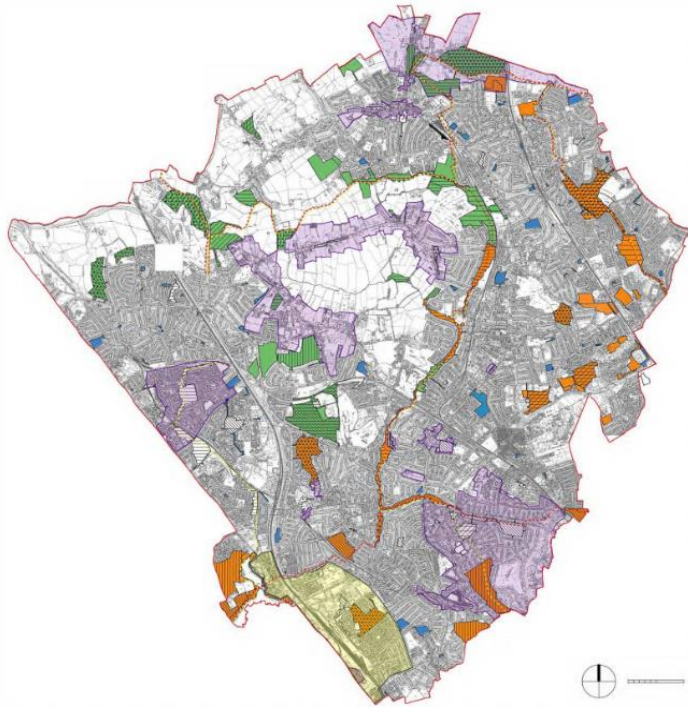


NATURAL CAPITAL ACCOUNTING IN POLICY-MAKING AT DIFFERENT SCALES

WAVES Forum, The Hague, November 17



eftec

Economics for the Environment Consultancy

INTRODUCTION

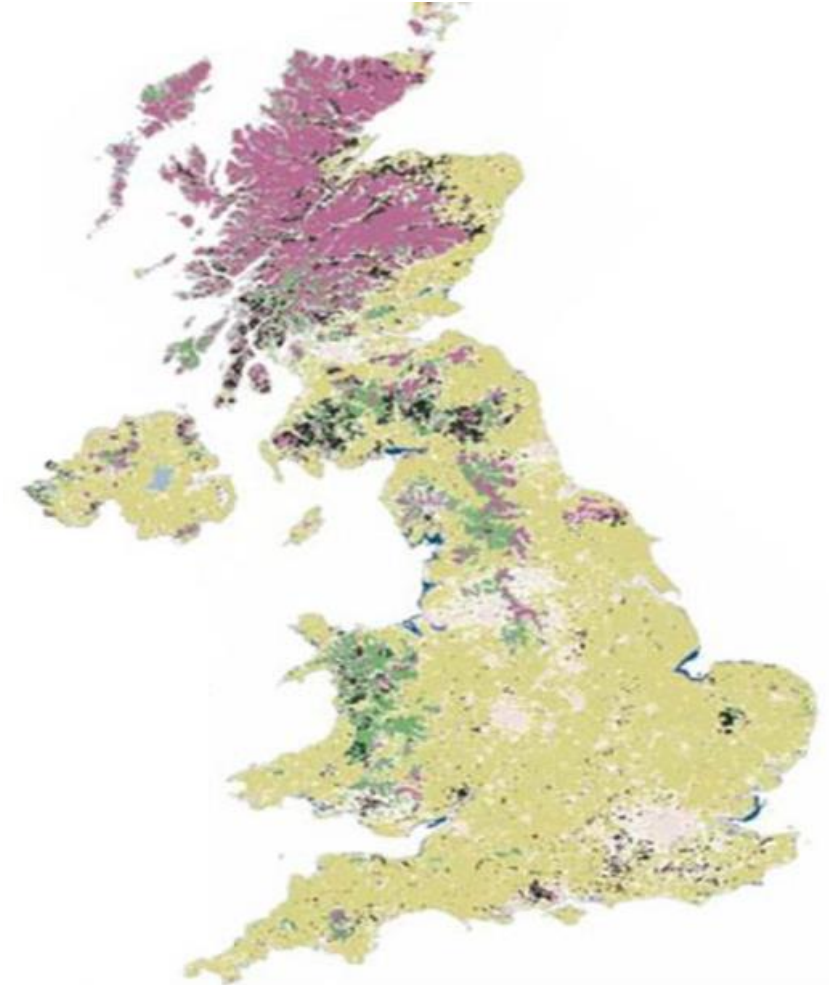
eftec: economics for the environment consultancy, 25 years old! ~ a leader in Natural Capital Accounting:

- Developed organizational method (CNCA) for UK Natural Capital Committee
- Leader/ contributor to many of the UK's asset/service natural capital accounts
- An author of Natural Capital Protocol
- Corporate natural capital accounting method (CNCA) is for a defined spatial asset:
 - Flows and values of benefits and maintenance costs are compared in a balance sheet
 - Provides managers with evidence quantifying the benefits from its green infrastructure
 - Helps show return on management and demonstrates cost savings to other departments
- Accounts in UK at different scales examine physical health and recreation benefits
 - Methods use similar physical data
 - Monetary valuations vary depending on decision-makers' needs

NATIONAL - UK URBAN NATURAL CAPITAL ACCOUNT

- UK Urban Account valued the following benefits:
 - Food provision, global and local climate regulation, air quality regulation, noise regulation and physical health from outdoor recreation
- Physical Health from Outdoor Recreation

	Monetary Flow	Asset Stock Value (PV, 100 years, 3.5% D.R.)
Total Avoided Health Costs	£900m p.a.	£26,840m p.a.
Welfare Value (base on QALYs)	£1,480m p.a.	£44,170m p.a.



Source: UK National Ecosystem Assessment Report

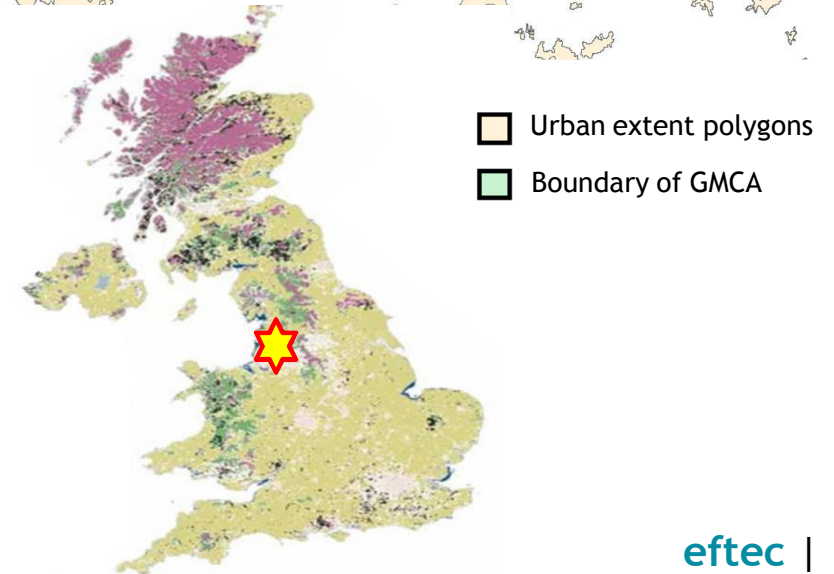
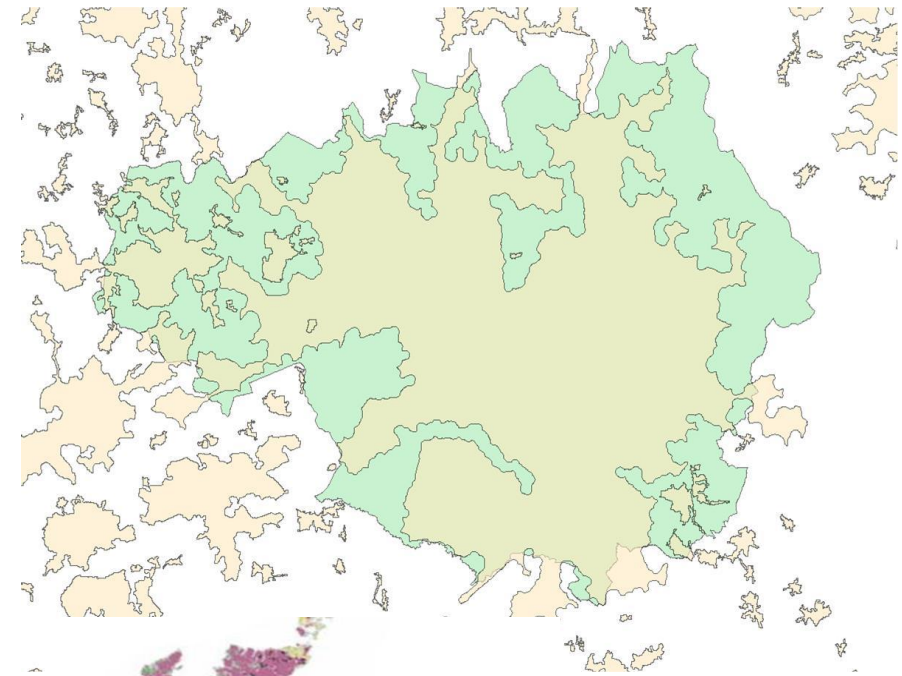
CITY - MANCHESTER, UNITED KINGDOM

- Manchester account values benefits from tree cover and green space through
 - Noise regulation, global and local climate regulation and physical health from outdoor recreation
- Physical Health from outdoor recreation

	Monetary Flow	Asset Stock Value (PV, 100 years, 3.5% D.R.)
Avoided direct and indirect Costs to Society	£38m p.a.	£1.9bn
Welfare gain (base on QALYs)	£63m p.a.	£1.1bn

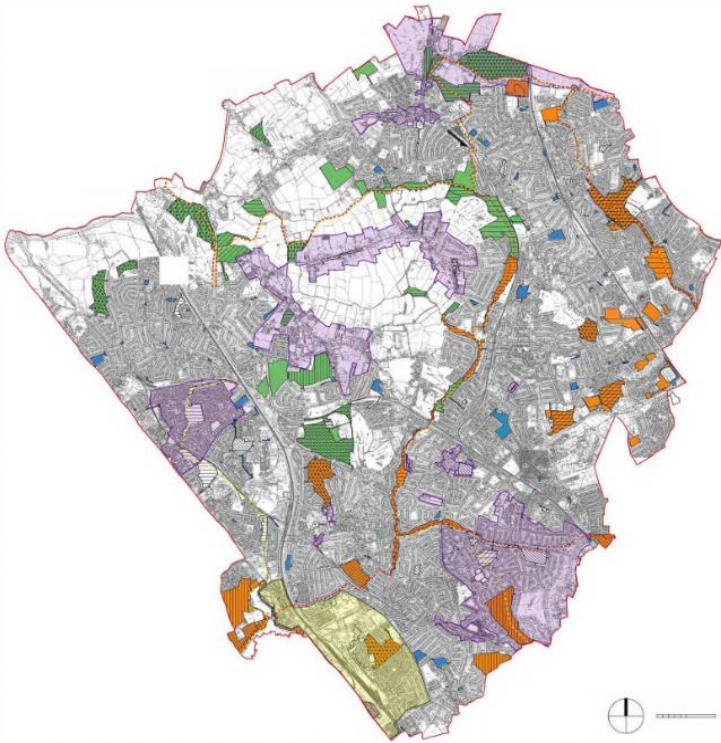
Source:

<http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=19843>



LOCAL - LONDON BOROUGH OF BARNET CNCA

- A suburban borough in North London
- 890 ha of open space provision (approx. 10% of area)



- CNCA examined:
 - Recreation (£41m/yr welfare value)
 - Physical health (£19m/yr avoided costs)
 - Property premium
 - Climate regulation
 - Maintenance costs

Barnet Parks Balance Sheet, 2016

	Total Value PV ¹ (£m)
Natural Capital Assets	
Asset Value	1,944
Gross Asset Value	1,944
Liabilities	
Maintenance Costs	(134)
Net Asset Value	1,810

¹ PV= present value of future benefits in perpetuity discounted to 2016 prices
 Asset Value is PV of all future benefits
 Liability is PV of all future maintenance expenses

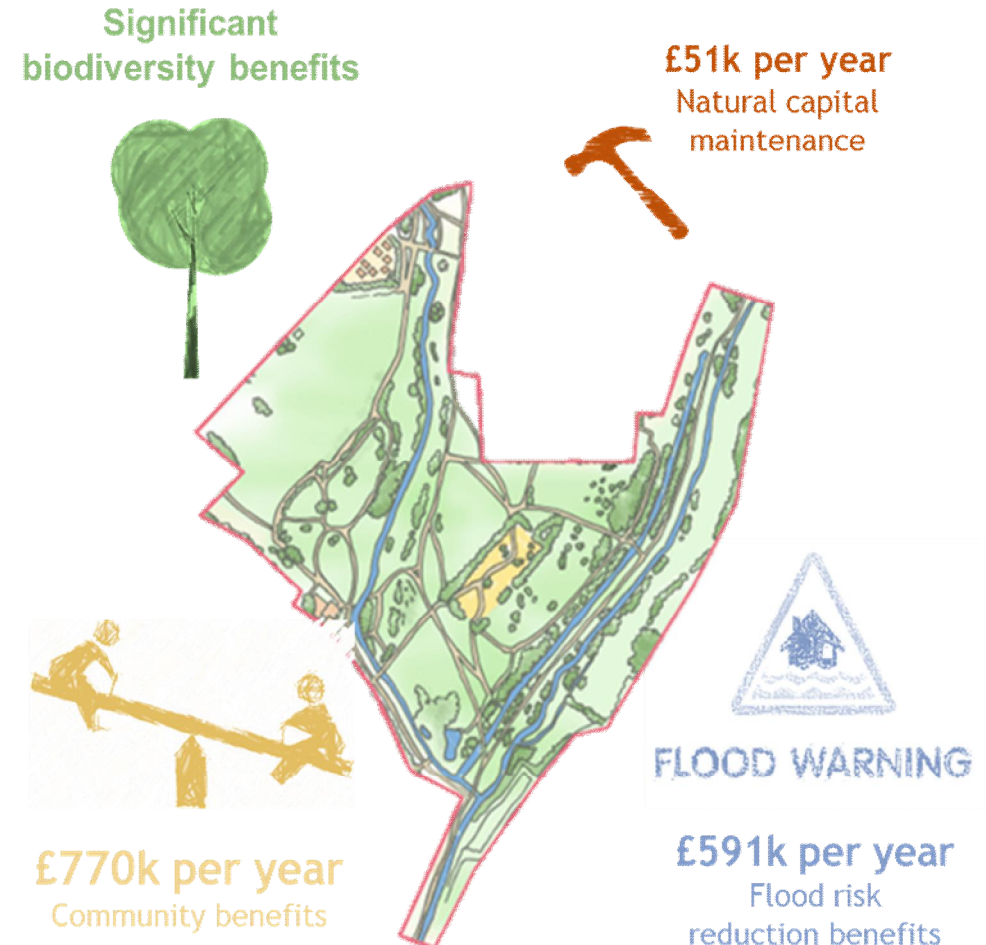


Source: <https://naturalcapitalcoalition.org/london-borough-of-barnet-corporate-natural-capital-account/>

SITE - BEAM PARKLANDS, LONDON

- Urban greenspace in the London Borough of Barking and Dagenham
 - Delivers a range of benefits to the local community such as Flood water storage, Recreation and Health
- CNCA considers a broader perspective of the amenity value of Beam Parklands
 - Reflected by a residential and non-residential property price 'uplift' in the site vicinity
 - Estimates impact of NC assets on property value
- Key Results for Local Community Benefits:
 - Total net local community benefits: £796,000
 - Net present Value (over 99 years): £26m

Source: <http://thelandtrust.org.uk/publication/beam-parklands-natural-capital-account-eftec-2015/>



SUMMARY AND COMPARISON OF CASE STUDIES

SCALE	LOCATION	SERVICE(S) VALUED	VALUATION METHOD	VALUES (£)	
				Annual	Asset
National	UK	Physical health from outdoor recreation	QALY based welfare value Total avoided current health costs (= exchange value?)	£1.48bn £0.9bn	£44bn £27bn (over 100 yrs)
City	Manchester	Physical Health	QALY based welfare value Total avoided indirect and direct costs to society	£63m/yr £38m/yr	£1.1bn £0.8n (over 100 yrs)
Local	London Borough of Barnet	Recreation and Physical Health	Welfare value of visits Total avoided health costs	£40m/yr £19m/yr	Gross: £1.94bn Net: £1.81bn
Site	Beam Parklands, London	Local community benefits (recreation, amenity and health)	3% property price uplift (residential and non-residential)	£0.8m/yr	NPV: £26m

FINAL REMARKS

- SDG 3: Good Health and Well-Being: Maintenance and enhancement of green infrastructure delivers natural capital benefits in the urban environment, contributing to the well-being of local communities
- SDG 11: Sustainable Cities & Communities: Enable the protection of cultural and natural heritage, and local disaster risk reduction strategies
- SDG 13: Climate Action: Methods illustrated here can be added to other benefits of green spaces such as improved resilience to climate change (e.g. flood water storage)
- SDG 15: Life on Land: Promote the integration of ecosystem and biodiversity values into planning across all levels of government

Organise environmental and economic data for decision-makers

Different valuations give most relevant information to scale of decisions

Can produce a balance sheet (asset values and liabilities) or support CBA

CONTACT

Ian Dickie

ian@eftec.co.uk

eftec

www.eftec.co.uk