

Developing the Green Potential

Durham 13 Oct 2009

Natural Economy NW, The NW GI Partnership and the economic benefits of GI - a good journey!

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GI Manager - Natural Economy Northwest





GI conference – Jan 2005

2003

The Mersey Forest
And
St Helens

Countryside in and around Towns

**Green
Infrastructure
Unit (March
2005)**



**Think tank established
May 2006)**

GI in the climate change action plan

Work on Regional Spatial Strategy

GI Forum set up May 2007



Natural
Economy NW
June 2007

GI Guide



RSS Approved

Critical GI work

Sept
08

NENW - reports – economic values, tests
and case studies



Sub GI regional plans
Investment Forum
LDF work
GIU Service

What is Natural Economy Northwest?

- A three-year partnership programme from Jan 07 to maximise the econ benefits from existing and new investment in The Region's natural environment - *delivering RES Action 113*. →
- A multi-agency/cross-sectoral partnership lead by Natural England, the Northwest Regional Development Agency and the SITA Trust.
- The Shared Vision – “A prosperous economic future with a thriving natural environment”.



RES Action 113

Develop the economic benefits of the region's natural economy through better alignment of environmental activities and economic gain and develop a strategy for Green Infrastructure and Transport Corridors

IMPROVING PRODUCTIVITY AND GROWING THE MARKET (£10bn of gap)	CONDITIONS FOR SUSTAINABLE GROWTH	GROWING THE SIZE AND CAPABILITY OF THE WORKFORCE (£3bn of gap)
1 Transform Business Link into a key enabler of high productivity and enterprise, and integrate skills brokerage with this service	63 Deliver demand management and improvements on the Greater Manchester/Cheshire motorways	43 Deliver employability activities and reduce the number of people on Incapacity Benefit
8 Cluster programmes in priority sectors to develop higher value activity and improve productivity	64 Improve road access to Liverpool City Centre	44 Deliver intensive support for those groups with low employment rates
9 Exploit opportunities from creation of a Media Enterprise Zone linked to BBC relocation	65 Develop the second Mersey crossing	45 Develop job brokerage to link employers with vacancies and workless individuals
12 Help businesses to implement process and product/service innovation	66 Reduce levels of congestion by increasing use of public transport and reducing peak traffic volumes	47 Develop and implement an integrated economic plan for East Lancashire
13 Enhance Business/HEI collaboration and knowledge transfer	67 Deliver capacity improvements to the Manchester Rail Hub	48 Implement the Blackpool Masterplan
15 Implement the Northwest Science Strategy	72 Grow Manchester and Liverpool John Lennon Airports	49 Develop and implement the Barrow Master Plan
16 Support major research concentrations and knowledge nuclei	73 Grow the Port of Liverpool	50 Develop and implement an integrated economic plan for West Cumbria
17 Inform companies of global opportunities/risks and help them to compete internationally	77 Develop Manchester Metrolink, and mass transit for Liverpool and the Mersey Belt including links to Deeside	52 Encourage employment creation in or near deprived areas
23 Improve Business Resource Efficiency and Waste minimisation (BREW) support to business	80 Deliver the designated Strategic Regional Sites	54 Capitalise on the strengths and assets of Manchester, Liverpool and Preston as drivers of city/regional growth
24 Develop and implement a Regional Climate Change Action Plan	85 Ensure new housing to support regeneration or knowledge based economic growth	55 Develop plans to capitalise on ongoing private sector investment around Crewe, Chester, Warrington, Lancaster and Carlisle
26 Deliver the basic skills required by employers for those without qualifications	87 Set Housing Market Renewal within a strong economic context	56 Implement plans to ensure ongoing growth in the rural economy as part of the Regional Rural Delivery Framework
27 Deliver the skills required by priority sectors	96 Support Liverpool European Capital of Culture 2008 to maximise the full economic benefit	
28 Deliver the skills required to maximise the economic impact of key growth opportunities	101 Improve the product associated with tourism 'attack brands' and 'signature projects'	
31 Develop intermediate/higher level skills and linkages to workless people	111 Deliver the Regional Equality and Diversity Strategy	
35 Develop management/leadership and corporate social responsibility skills	113 Develop the economic benefit of the region's natural environment	
37 Develop educational attainment	114 Implement The Lake District Economic Futures Policy Statement	
38 Develop the University for Cumbria and ensure provision of HE opportunities in East Lancashire	119 Invest in quality public realm/ greenspace/environmental quality	

NENW GI Programme - summary

1) Policy + Intellectual Underpinnings:

- Ecotec Policy and **Economic Benefits** Reviews, Ibis Grey/Green Infrastructure Review, + City Greens Feasibility study,

2) Strategic approach - Planning, Funding and Coordination:

- **Regional GI Synergy/Inter-agency Coordination** - via GI Steering Group, backed by “new architecture”: Reg GIU, GI Forum, GrITT, NENW IF and increasing joint working.
- **Work with the SRPs to dev a *strategic* approach to GI planning at the subregional level (supported via Reg GIU, plus Subreg Guide),**
- NENW Strategic Funding Review and the “NW IF” pilots.

3) Developing good practice:

- GI demonstration projects.
- Guidance for Natural Economy Projects re maximising econ benefits
- Building capacity and capability: training + culture change

The Economic Benefits of GI - *in general*

- ECOTEC commissioned to summarise the evidence base.
- Wide consultation.
- Ministerial launch of joint report – 27 Oct.2008
- Joint Summary plus 3 detailed reports, available @: www.greeninfrastructurenw.org.uk
www.naturaleconomynorthwest.co.uk
- **11 benefits now widely used across NW and beyond** and found to apply to the soc and env as well.

The 11 Economic Benefits of Green Infrastructure – in general

- **Flooding alleviation and Water Management.**
- **Economic growth and Investment**
- **Tourism.**
- **Climate Change adaptation and mitigation.**
- **Quality of Place.**
- **Health and Well-being.**
- **Land and Property values.**
- **Labour productivity.**
- **Recreation and Leisure.**
- **Land and Biodiversity.**
- **Products from the land.**



To put GI onto the same footing as the other critical infrastructures we need:

1. Acceptance of the case for planning and managing GI.
2. Agreement on how to do this, and
3. Agreement on how to value and prioritise investment in GI.

The Econ bens pt 2/Genecon contract is designed to help with all three, especially 1 + 3

So, we brought together a unique consortium of:

- 4 x RDAs – Advantage West Midlands, One NE, NWDA, & Yorkshire Forward,
 - The Northern Way
 - Natural England
 - NENW &
 - Tees Valley Partnership
 - DEFRA, and now
 - The LDA
- Supported by:*
- GONW/other GOs
 - Forestry Commission
 - And a wider partnership of NGOs

To fund and let a contract with **GENECON**,
Contract managed by the Tees Valley Partnership



GENECON Outputs

- ❑ **Output 1: Definitions, Beneficiaries, Strategic context**
 - *Why important – to mainstream GI to influence planning & investment decisions*
 - *Thought / discussion piece*
- ❑ **Output 2: Advice for Regional & Strategic Planners**
- ❑ **Output 3: ‘Toolbox’ for project investors**
 - *Valuation methodologies for the Ecotec 11 benefit streams*
- ❑ **Output 4: Exemplar Business Cases**
 - *Tees Valley GI Strategy & Liverpool Knowledge Quarter Public Realm / GI Strategy (& now London Green Grid)*
- ❑ **Output 5: CITYgreen conversion**
 - *Feasibility of GI GIS decision support system for UK application from US*

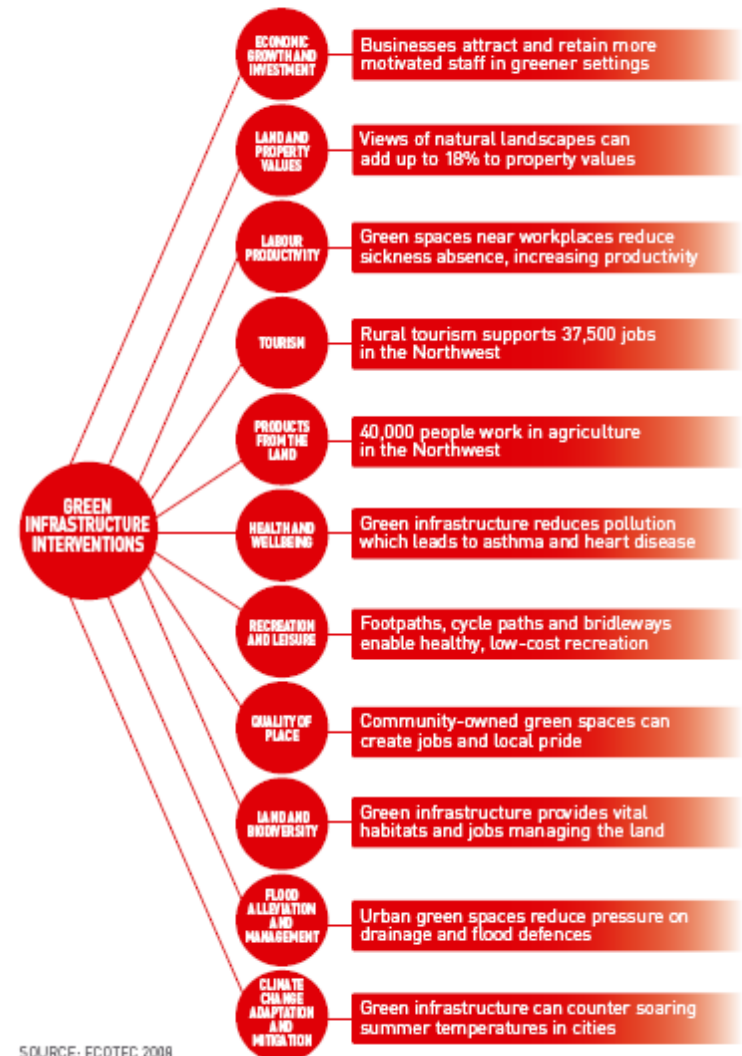
The Toolbox: Objectives

- ❑ **Set of tools** which can capture the economic and social benefits of Green Infrastructure
- ❑ **Usable** by project promoters and funders – agreed, common techniques and common language
- ❑ **Promote** and mainstream GI thinking
- ❑ Identify **gaps** in evidence base and future work needed
- ❑ Completion during 2009

Toolbox: ECOTEC 11 Benefit structure

- ❑ Not perfect – overlaps and gaps – but using as our framework for building a Toolbox
- ❑ GENECON approach – pragmatic application of valuation methods
- ❑ The “Art of the Possible” – put in place a set of valuation approaches – to be used for bespoke assessments, on a project by project basis

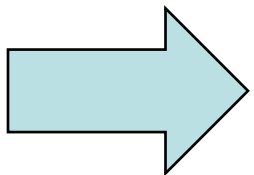
Figure 1: The economic benefits of green infrastructure



SOURCE: ECOTEC 2008

The Toolbox: challenges

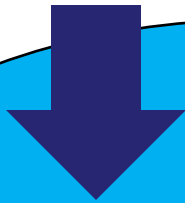
- ❑ c20 years of research, custom and practice – little synthesis
- ❑ Multi-functionality of GI reflected in very **broad**, often **technically detailed** research base
- ❑ Literature includes exaggerated or unsupported claims – and some contradictions
- ❑ Often weak causal relationships



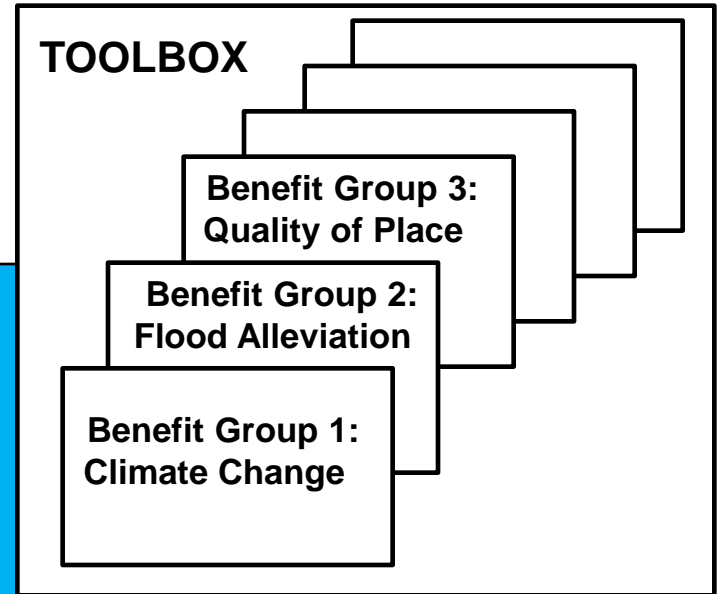
Aiming to capture best available techniques for more general application in the 'Toolbox'

The Toolbox: challenges

GETTING THE BEST OF
ALL THIS...

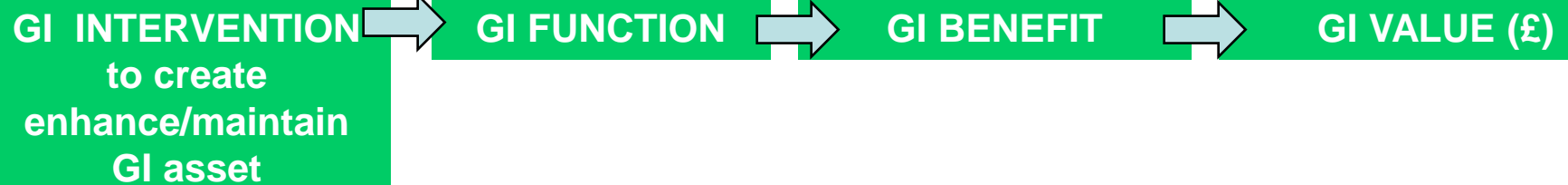
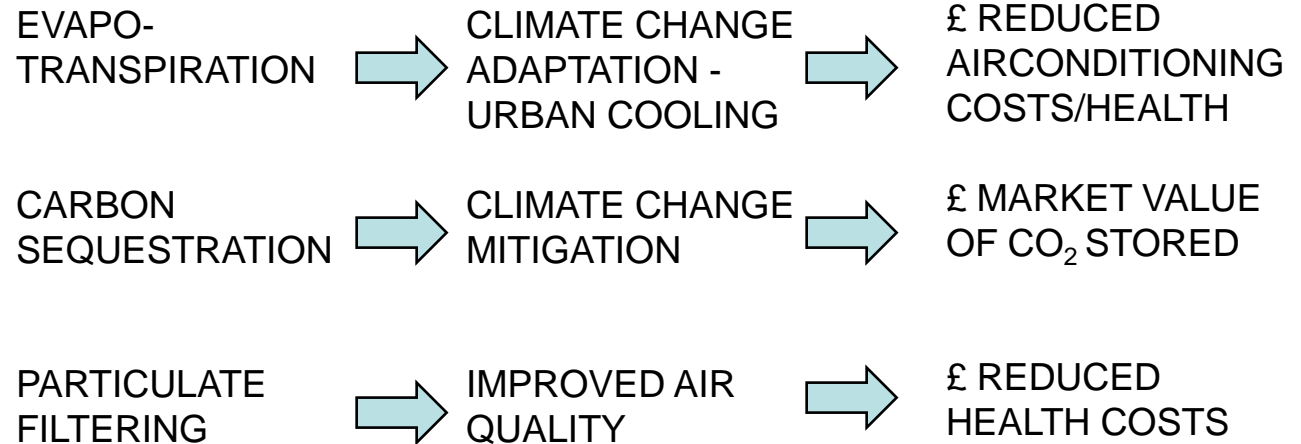
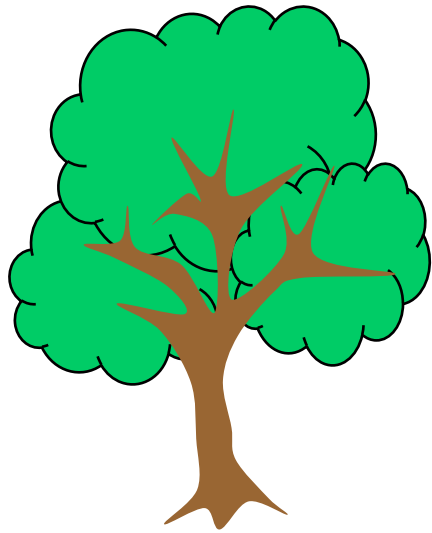


Research, anecdotal
evidence, case studies,
departmental appraisal
tools, assertions,
received wisdom
etc etc



....INTO THIS.

The Toolbox: Causality and Monetisation

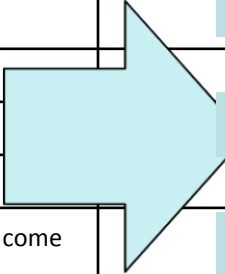
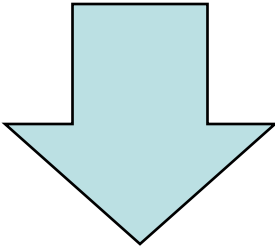


QUANTITATIVE EVIDENCE OF CAUSALITY? ➔ ? ➔ ?

ROBUST MONETISATION APPROACH, or other quantitative measure, or just an indication of scale ?

The Toolbox: Set of valuation tools

ECOTEC BENEFIT GROUPS		GI FUNCTIONS	GI BENEFIT
1	Climate Change Adaptation	GI provides a cooling effect, through evapotranspiration	VALUATION TOOL 1
		GI can provide shading from the sun	
	Mitigation	GI can offer shelter from wind	VALUATION TOOL 2
		GI can sequester carbon	
2	Flood Alleviation	GI can store and intercept rainwater	VALUATION TOOL 3
		GI can contribute to coastal storm protection	VALUATION TOOL 4
	Water management	GI provides fresh water	
3	Quality of place	GI provides opportunities for communities to come together	VALUATION TOOL 5
		GI can improve attractiveness of a location, attracting investment and raising land values.	VALUATION TOOL 6
4	Health & Well-being	GI offers opportunities for exercise	VALUATION TOOL 7
		GI can contribute to improved air quality	
		GI can reduce...	Etc Etc...



GENECON – Project timetable for outputs 3 + 4

Toolbox – completion of first user version by end 2009
(for user testing and development)

Business Cases – for:

Tees Valley GI;

Liverpool Knowledge Quarter;

London Green Grid Autumn/Winter 2009

Dissemination/discussion -

19 October – discussion with Defra Economics Group,
London

19 November – Northern Way City Regions GI Seminar,
Leeds – toolbox presentation

Spring 2010 – Joint National Dissemination with CABE/Defra
– venue tbc



NEW WEB REFERENCE FOR UPDATES ON THE GENECON PROJECT

[www.yhub.org.uk/results.aspx?ht=
Economic+Benefits+of+Green
+Infrastructure](http://www.yhub.org.uk/results.aspx?ht=Economic+Benefits+of+Green+Infrastructure)



NW GI partnership – Summer 2009

Natural Economy

The 11 Economic Benefits
+ Menu of tests for investors

SubRegional GI Plans

Other Reports and GI Proj Guide

Demonstration projects + training

Climate Change

Eg NW CC Action Plan
– Action 4.3

Support/Coord Services

NW GI Steering Gp

NW GI Forum

GI Think Tank

NW GI Unit + Panel

NENW IF

Growth Points

Meeting the environmental conditions

Water Cycle

SFRA

Habitats Regs

Surface Water

Contaminated land

Air Quality

Green Infrastructure Strategy

Planning and policy

Regional Policy and Guidance

Single Reg Strat + "Critical Infrastructures"

Local Development Frameworks

Area Based Regeneration initiatives

NWDA, NE, EnvAg, GONW, FC, CFNW, 4NW, NENW & CABE

GI - The Fifth Critical Infrastructure

•Infrastructure – the basic physical and organisational structures needed for the operation of society or enterprise (Oxford English Dictionary).

The 4 Critical Infrastructures:

Transport.

Water.

Power.

Waste.

The 5th Critical one is:

Green Infrastructure!

Now recognised in the RS.



1) Policy + Intellectual Underpinnings:

- Suite of research reports and research summaries published on NENW web site
 - The 11 Economic benefits framework now widely used in the NW and more widely
 - Acceptance that GI delivers economic value- albeit hard to measure
- National coalition engaged in the development of practical tools to measure the benefits
 - More development of and more confidence in the intellectual underpinnings of GI
 - More effective interchange between academics and practitioners across the sectors.



2) Strategic approach - Planning, Funding and Coordination:

- **Regional GI Synergy/Inter–agency Coordination** - via GI Steering Group, backed by “new architecture”: Reg GIU, GI Forum, GrITT, NENWIF, and increasing joint working.
- **Complementary work in each subregion to dev a *strategic* approach to GI planning (supported via Reg GIU), plus Guide to GI planning at the subregional scale, linking to NW Climate Change Action Plan activity, & providing an input to the new RS – GI as the 5th critical infrastructure.**
- NENW Strategic Funding Review and the “NENW Investment Forum” pilots (city cooling and an approach delivering GI and employment benefits together, both in development).

3) Developing good practice:

- GI demonstration projects. 8 completed, ranging from strategic industrial sites, thro HMRs to regional parks. Summaries published to web. Summary report to draw out the lessons for in development.
- Guidance for Natural Economy Projects re maximising econ benefits - final report in draft form.
- Building capacity and capability: training + culture change- key focus has been planners, esp to influence work on LDFs, GI consultants, strengthening the reources in the regional GIU, and developers of both economic and environmental projects.

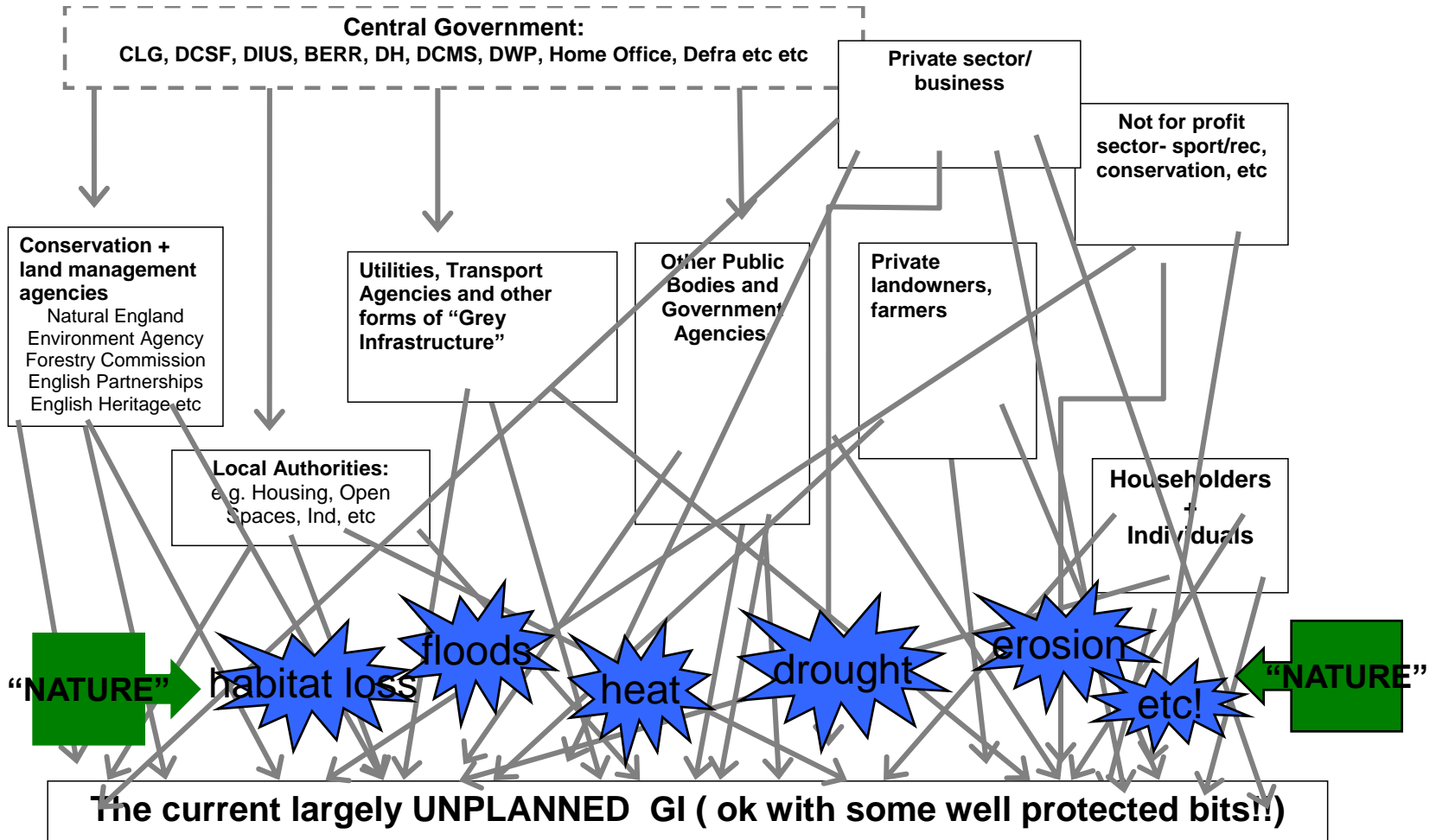


THE LEGACY

- An effective cadre of GI practitioners across the Region
- A strengthened “regional architecture” and partnership enabling greater impact for the GI interest in the NW than in other regions, and more effective use of resources
- The concept of GI as the fifth critical infrastructure, underpinning economic growth and delivering economic, social as well as environmental benefits, accepted and built into the development of the new Regional Strategy
- A strong body of shared work: research, case studies, advanced technical work, mapping, PBRs and demo projects, etc, etc, all underpinning the planning and management of our precious GI.
- Recognition nationally and internationally for the pioneering GI work being done by partners across the NW
- The NW is leading a revolution in starting to plan, manage and maintain our GI, at all scales, like the other “I’s”, maximising GIs contribution to: sustainable econ dev/climate change/wellbeing/biodiversity/tourism/work creation/health improvement/quality of place/flood management.....**



Moving from a laissez-faire to a planned approach to GI



A WELL PLANNED GREEN INFRASTRUCTURE MANAGED ALONG SIMILAR LINES TO THE OTHER CRITICAL INFRASTRUCTURES DELIVERING THE OPTIMUM MIX OF BENEFITS

GI Planning - what are we seeking to do?

- Create new GI where needed - often retro-fitting new GI into old places (+ buildings).
- Enhance the functions of existing GI, esp to meet new needs.
- Recognise what is already good and protect it.
- Thro integration secure better VFM
- Ensure GI **IS** planned, delivered, managed and *maintained* like other forms of infrastructure – at different scales and properly linked into planning + resource allocation.



~ TO MAXIMISE *ALL* THE ECON, SOCIAL+ ENV BENEFITS
and SUSTAIN THE ECOSYSTEM

An aerial photograph of a coastal region, likely in North West England, showing a mix of green fields, forests, and urban areas. The coastline is visible on the left, with a bay and several smaller inlets. The water is a deep blue, and the land is a vibrant green, indicating a healthy natural environment.

Onwards & upwards- sustainably!

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www.naturaleconomynorthwest.co.uk

www.yhub.org.uk/results.aspx?ht=Economic+Benefits+of+Green+Infrastructure