

# Mainstreaming Nature Using Green Infrastructure

Alister Scott BA PhD RTPi



# Mainstreaming Green Infrastructure



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SCIENCE OF THE  
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## Key questions underpinning this fellowship:

1. What does good green infrastructure actually look like in planning policy and decision-making processes?
2. How can we translate existing NERC and other research science associated with GI cumulatively into additional pathways to impact to address key policy and practice challenges and opportunities?
3. How can we demonstrate and evaluate the added value of GI in planning policies and interventions?
4. How can we change/influence behaviour(s) of key actors in the planning arena regarding their valuation and use of GI in policy making and practice?

## My role as a NERC Knowledge Exchange Fellow

As a knowledge exchange fellow I see my role as a catalyst integrating multiple planning policy and practice viewpoints across key stakeholders who use/shape the planning system.

These participants will co-produce the project's outputs within a managed process that is developmental, pragmatic and peer reviewed; delivering a suite of guidance, tools and resources that mainstream GI in policy and decision making thereby embracing the government's economic growth and quality of life agendas.

# Questions using a GI lens

- 1) What is mainstreaming and what added value does it offer for environmental policy and practice?
- 2) What theoretical insights emerge from the literature and practice?
- 3) How can mainstreaming be better conceptualised?
- 4) How can we improve future environmental mainstreaming?





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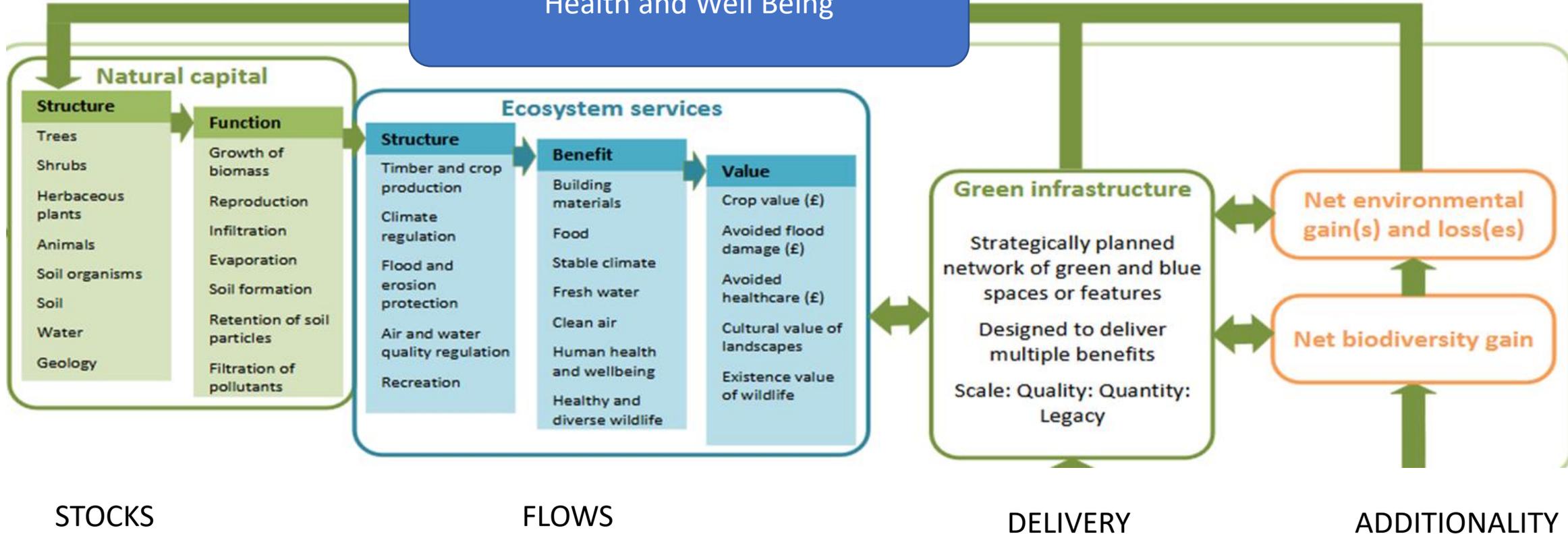
- “Green infrastructure is a **strategically planned network (multiple scales)** of natural and semi-natural areas with other environmental features **designed and managed to deliver a wide range of ecosystem services** such as water purification, air quality, space for recreation and climate mitigation and adaptation.
- This network of **green (land) and blue (water) spaces** can improve environmental conditions and therefore citizens' health and quality of life. **It also supports a green economy, creates job opportunities and enhances biodiversity”**.

Source:

[http://ec.europa.eu/environment/nature/ecosystems/index\\_en.htm](http://ec.europa.eu/environment/nature/ecosystems/index_en.htm)



**Health and Well Being**



# What is mainstreaming?

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- an “interdisciplinary and transdisciplinary process of transmorphing and normalising a concept, objective, policy or plan into the decision-making and routine activities of multiple policy domains necessary for effective delivery and impact; and in so doing build sufficient capacity and resilience to improve operational processes and outcomes enabling beneficial societal impacts for the long term”. Scott et al (in press)



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# Additionality

- Enable more holistic responses and joined-up interventions to a given policy priority (Benson et al., 2014; Cowling et al., 2008).
- Break down silos (Adger et al., 2005; Runhaar et al., 2014).
- Tackle and manage wicked problems through pursuit of transdisciplinary approaches



# Mainstreaming Dangers

- Uncritical use of mainstreaming concept as a panacea
- Dilute Environment priorities (Vigar 2009; Lafferty & Hovden, 2003)
- Lowest common compromises Mommaas & Janssen (2008)
- Greenwash (Russel et al 2018)





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# BUT Evidence, Assessment, Policies, Interventions and decisions made in silos (Leach et 2017: Scott et al 2013)



# BUT Evidence for Policies/Decisions are dominated by metrics



We value what we measure

BUT we need to measure what we value



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# Furthermore

- Environment does not easily generate direct financial revenue; benefits of investments not easy to capture (Hanley & Barbier, 2009).
- conventional accounting methods treat the environment as a liability ignoring the wider benefits
- BUT the costs for long term environmental management are easily accounted (Horwood, 2011)



# Ingredients for Mainstreaming success: Academic Literature

1. **Building and securing collaboration** across disciplines & policy sectors (Benson et al., 2014; Cowling et al., 2008; Runhaar et al., 2018;
2. **Managing and diffusing change** to best advantage (Scott et al., 2018)
3. Delivering **policy integration** (Candel., 2021; Lafferty & Hovden, 2003; Runhaar et al., 2020; Russel et al., 2018)
4. Assessing impact of **governance and institutional actors** (Cowling et al., 2008; Karlsson-Vinkhuyzen et al., 2017; Russel et al., 2018).
5. Achieving **behaviour change** (Forest Research 2012)
6. Exploiting **hooks** and overcoming **barriers** (Runhaar et al. 2020; Scott et al., 2018)

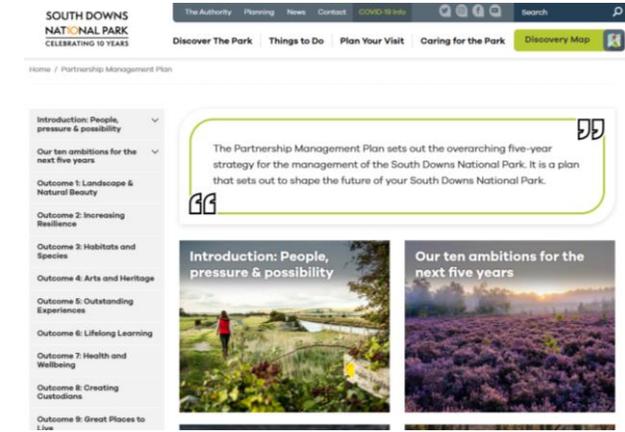
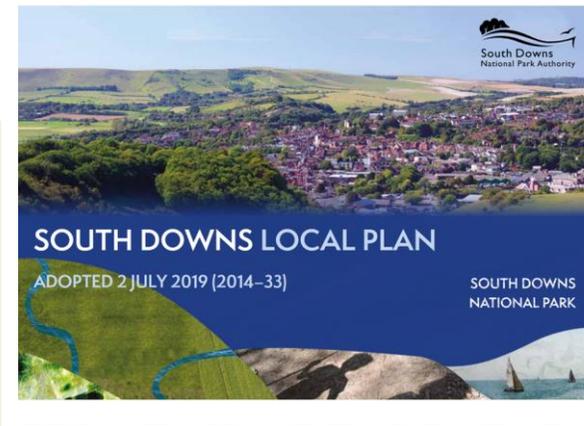
# Ingredients for Mainstreaming success: Policy and Practice Case Studies

- Go beyond the evidence aspect towards better policy and practice delivery
- Strong collaboration from outset with academics , policy and practice communities to tackle the challenge
- Develop guidance to help translate the science and language into SMART actions.
- Strong leadership at officer and board level
- Team approach not one persons responsibility.

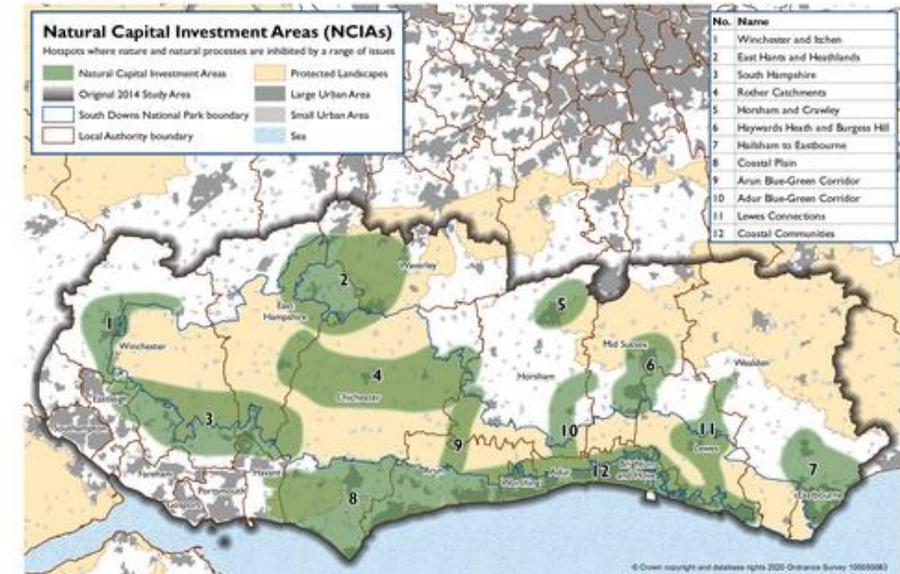
## Core Policy SD2: Ecosystem Services

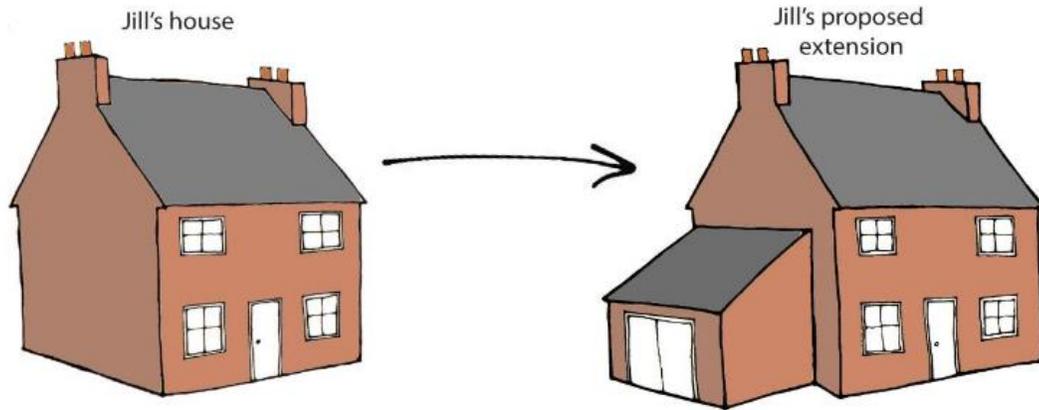
1. Development proposals will be permitted where they have an overall positive impact on the ability of the natural environment to contribute goods and services. This will be achieved through the use of high quality design, and by delivering all opportunities to:

- Sustainably manage land and water environments;
- Protect and provide more, better and joined up natural habitats;
- Conserve water resources and improve water quality;
- Manage and mitigate the risk of flooding;
- Improve the National Park's resilience to, and mitigation of, climate change;
- Increase the ability to store carbon through new planting or other means;
- Conserve and enhance soils, use soils sustainably and protect the best and most versatile agricultural land;
- Support the sustainable production and use of food, forestry and raw materials;
- Reduce levels of pollution;
- Improve opportunities for peoples' health and wellbeing; and
- Provide opportunities for access to the natural and cultural resources which contribute to the special qualities.



2. Development proposals must be supported by a statement that sets out how the development proposal impacts, both positively and negatively, on ecosystem services.





<https://www.southdowns.gov.uk/wp-content/uploads/2018/04/Core-06-Ecosystem-Services-Technical-Advice-Note-householder.pdf>

Jill's actions

Replacing the close boarded fence with a native hedgerow helps to soak up excess water, improves air quality and is great for wildlife



Replacing the concrete parking area with permeable surfacing helps reduce flood risk and surface water



Installing bat boxes is an easy way for Jill to support the local bat population



Planting wild flower mix is great for insects, which provides a food source for bats



Solar panels are one which which can reduce Jill's carbon footprint





## Standards Framework

(BwN 2.0)



## CORE Standards

- Standard 1** Optimises Multifunctionality and Connectivity
- Standard 2** Positively responds to the Climate Emergency
- Standard 3** Maximises Environmental Net Gains
- Standard 4** Champions a Context Driven Approach
- Standard 5** Creates Distinctive Places
- Standard 6** Secures Effective Place-keeping



## WELLBEING Standards

- Standard 7** Brings Nature Closer to People
- Standard 8** Supports Equitable and Inclusive Places



## WATER Standards

- Standard 9** Delivers Climate Resilient Water Management
- Standard 10** Brings Water Closer to People

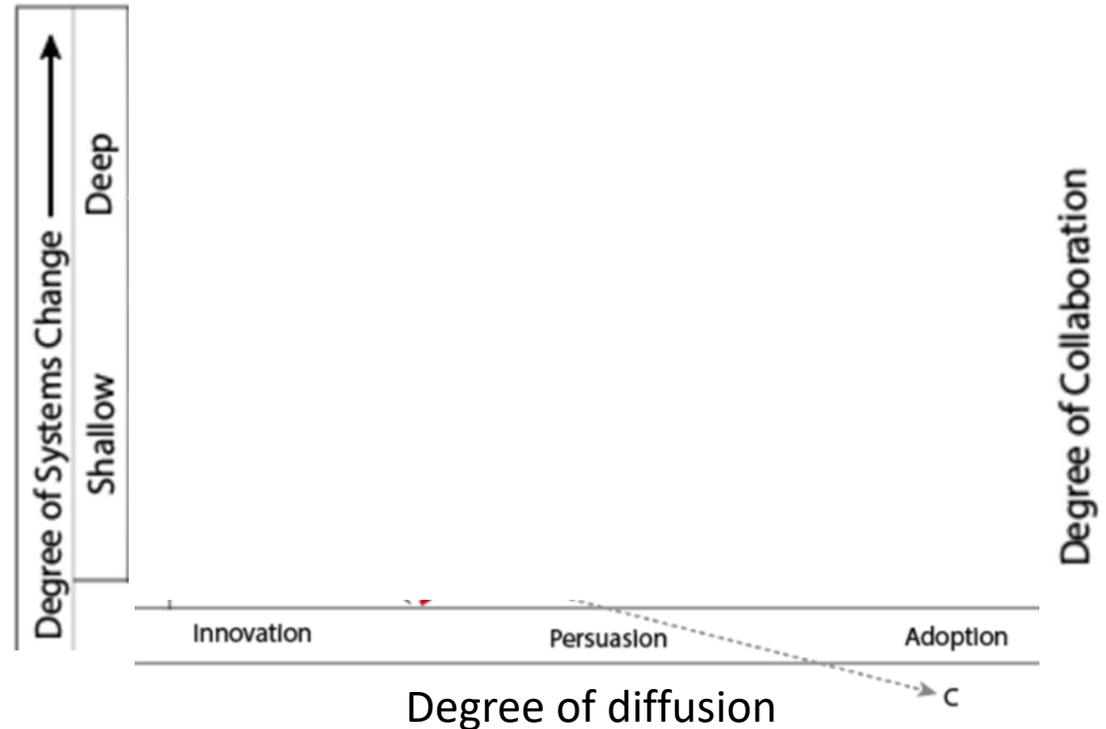


## WILDLIFE Standards

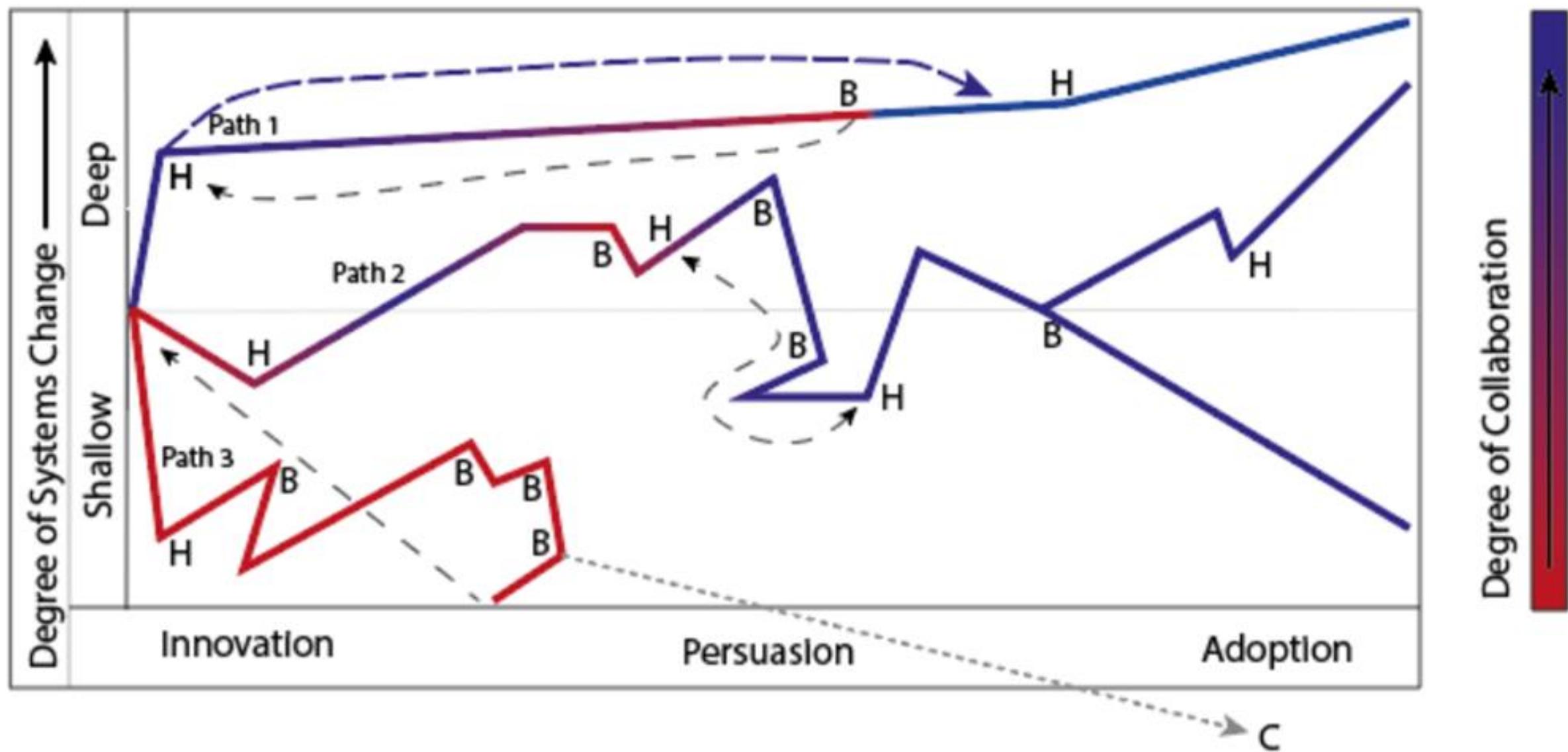
- Standard 11** Delivers Wildlife Enhancement
- Standard 12** Underpins Nature's Recovery

# Towards conceptualizing a hybridized mainstreaming framework (Cowell & Lennon, 2014)

- Fusing key ingredients from research and practice
- Not developing another new framework
- Identifying key gaps (temporal dynamics)



Draw your line for GI pathway



# Take home messages

- Environmental mainstreaming is a complex process: GI is only one pathway
- We currently are too stuck in a groundhog day persuasion phase
- Need to advance using more collaborative approaches actively involving non env agencies
- Need to challenge environmental silos and jargon and embrace more inclusive concepts
- Be pragmatic in mainstreaming expectations and degree of system change

# Contact

- [Alister.Scott@northumbria.ac.uk](mailto:Alister.Scott@northumbria.ac.uk)
- <https://mainstreaminggreeninfrastructure.com/>