



# Nature-based solutions

## Marcus Collier



## What are nature-based solutions?

Nature-based solutions are “inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience”. [European Commission](#)

- Nature derived / nature inspired
- Be competitive with engineered / designed solutions
- Must benefit nature / ecosystem services
- Must provide co-benefits that *appreciate* over time
- Public nature-based solution: must be co-created / support biodiversity
- Private nature-based solution: must ‘do the job’ / cost effective



**NovelEco**

**COORDINATION**

- [Oppla Marketplace](#)
- [NetworkNature CSA](#)
- [Nature-based enterprise Platform](#)

**Cluster Taskforces**

1. Knowledge & Data
2. Integrated Assessment
3. Business & Finance
4. Communications
5. Co-creation & Governance

- **600+ partners**
- **200+ cities**
- **€450m+ [EU Site](#)**

EU Research and Innovation in **Nature-based Solutions**

Horizon 2020 / Horizon Europe Actions:

- [Connecting Nature](#)
- [UNaLab](#)
- [UrbanGreenUp](#)
- [GrowGreen](#)
- [ProGfreg](#) (regeneration)
- [PHUSICOS](#) (mountains)
- [URBINAT](#) (regeneration)
- [Reconnect](#) (rural / water)
- [Operandum](#) (hydrology)
- [Nature4Cities](#) (platform)
- [CLEARINGHOUSE](#) (EFI)
- [RUGGEDISED](#) (lighthouse)
- [ReGreen](#) (labs)
- [EdiCitNet](#)
- [FutureMARES](#) (Marine)
- [Ponderful](#) (ponds as NBS)
- [MacOBioS](#) (coastal)
- [CleverCities](#)
- [CONEXUS](#)
- [INTERLACE](#)
- [EuPOLIS](#)
- [eLTER+](#)
- [UPSURGE](#)
- [GOGREEN ROUTES](#)
- [IN-HABIT](#)
- [VARCITIES](#)
- [JUSTNature](#)
- [REACHOUT](#)
- [ESMERALDA](#)
- [PONDERFUL](#)
- [COEVOLVERS](#)
- [REST COAST](#)
- [WaterLANDS](#)
- [MERLIN](#)
- [SUPERB](#)
- [NICE](#) (urban water)
- [EcoAdvance](#) (freshwater)
- [MarinePLAN](#) (marine)
- [MSP4BIO](#) (marine)
- [Marine SABRES](#) (marine)

**Education**

- [NBS Eduworld](#) (CSA)
- [COOLSCHOOLS](#) (CSA)
- [NBS Pilot](#)

**Financing**

- [Invest4Nature](#)
- [NATURANCE](#) (PHUSICOS)

**Other EU Horizon Actions:**

- [NovelEco](#) ERC CoG
- [Niche4NBS](#) ERC StG
- [Eclipse](#) CSA (policy)
- [BiodivERsA](#) ERA-NET (cofund)
- [NaturVation](#) R&I (atlas) completed
- [NAIAD](#) R&I (insurance) completed
- [ThinkNature](#) CSA completed
- [NetworkNature+](#) CSA
- [ReNature](#) (CSA) Malta
- [WeValueNature](#) (CSA nat. cap.)
- [ACTonNBS](#) (Climate KIC)
- [CQuest GmbH](#) (EIC – Soil)
- [NaturaConnect](#) (Networks)
- [Bauhaus](#) (5 lighthouse projects)

**Other:**

- [Encore](#) (nat. cap)
- [UrbanGaia](#) (Ecosystem services)
- [Oxford](#) (policy platform)
- [Natura](#) (network of networks) NSF
- [Building with Nature](#) (design)
- [Viva Plan](#) (Nordic)
- [Circular City](#) (COST)
- [SMARTer Greener Cities](#) (Finland)
- [Geneva Network](#)



**Indoor health & well-being**



**Temperature / noise Insulation**



**Design challenges**



**Combined technology**



**Water attenuation**



**Heat island**



**Innovation**

# What do nature-based solutions look like?

# 'Green' Roof - Sedum monocrop



# 'Living' Roof - diversity



Diverse roof usage – quality of life



# Diverse roof usage – co-benefits



## Diverse roof usage – co-benefits



Engineering the 'impossible'

This project has received funding from

Not just buildings...

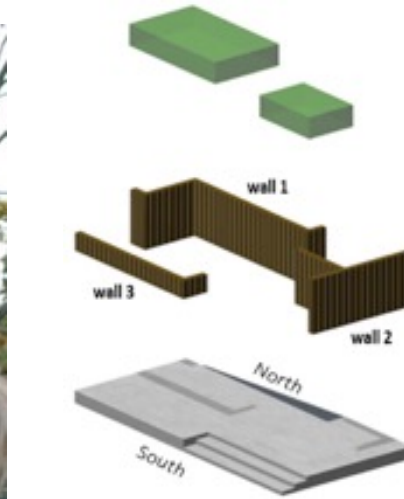


# Combining technologies





# Heat Island innovation





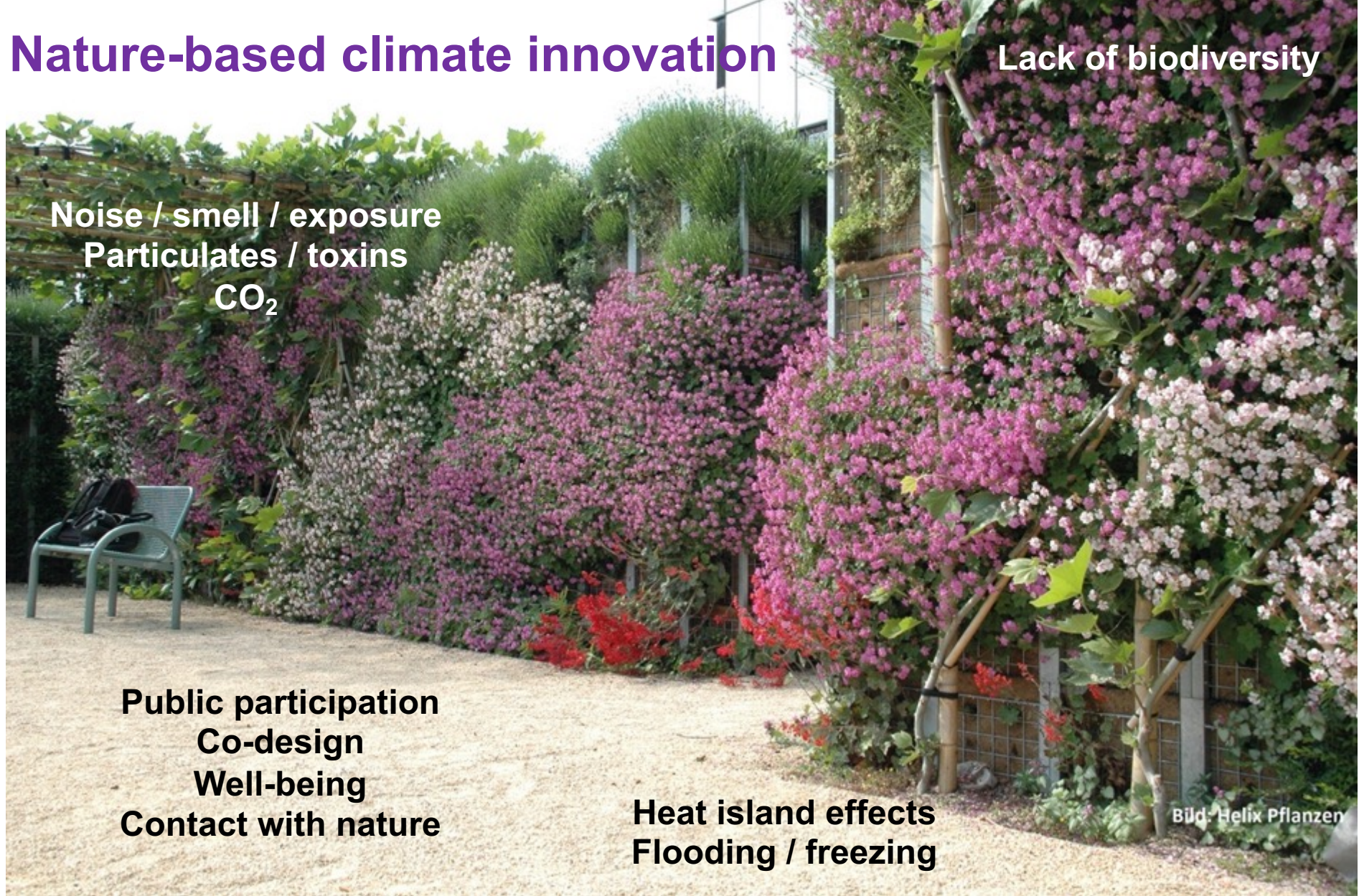
# Nature-based climate innovation

Lack of biodiversity

Noise / smell / exposure

Particulates / toxins

CO<sub>2</sub>



Public participation

Co-design

Well-being

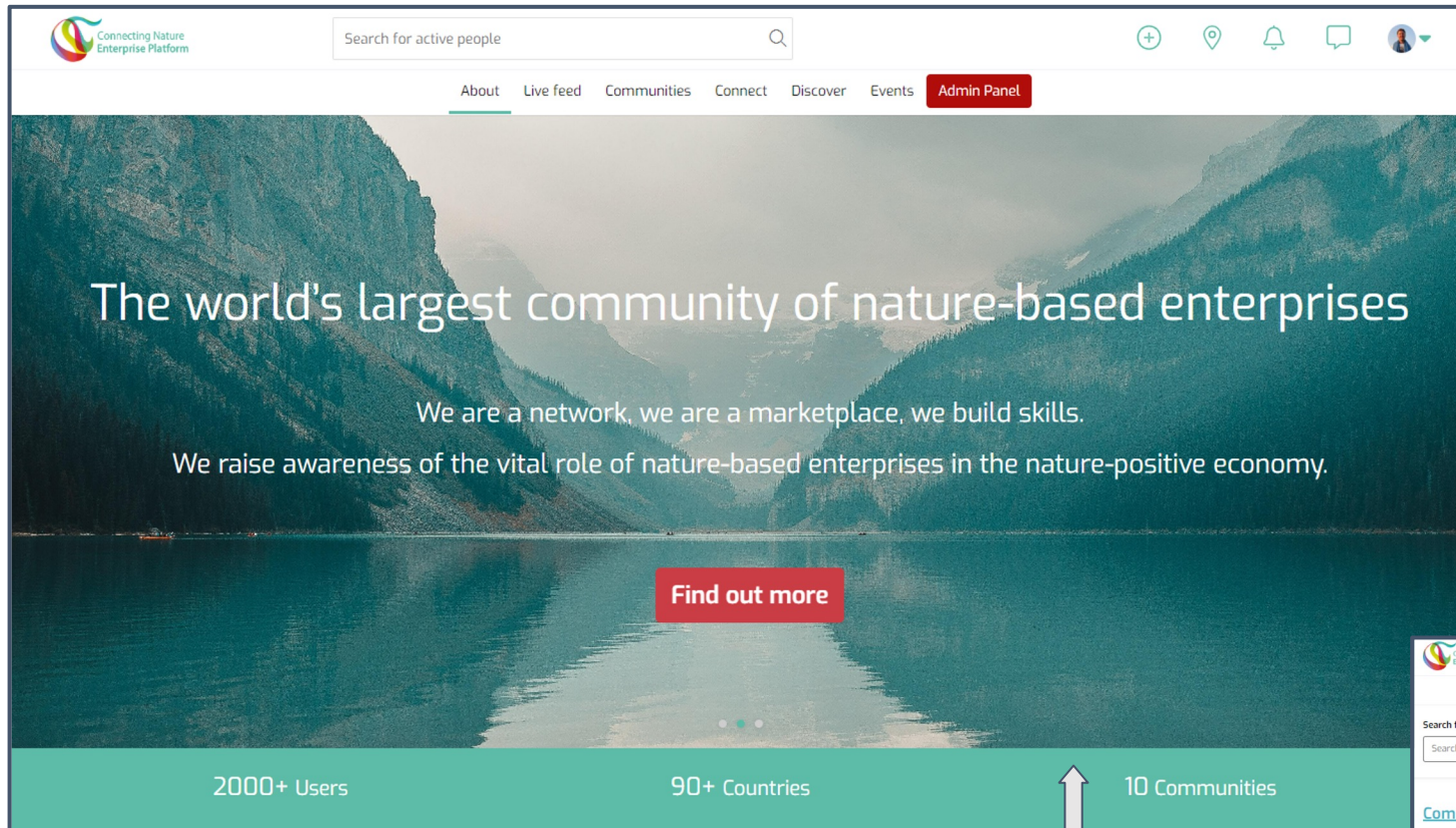
Contact with nature

Heat island effects

Flooding / freezing

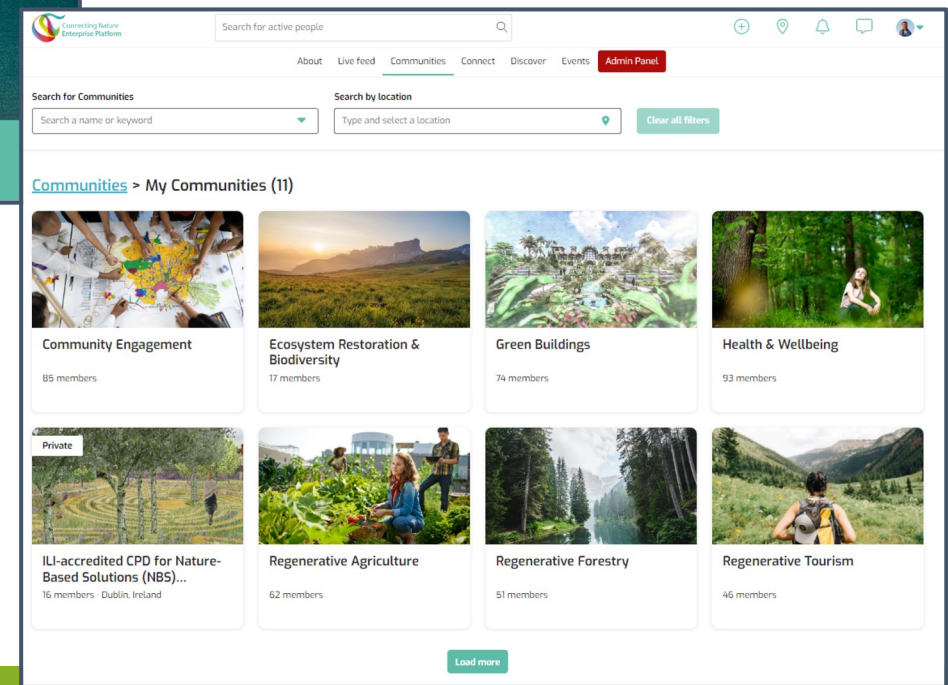
Bild: Helix Pflanzen





- 2,000+ Users
- 90+ Countries
- 10 Communities

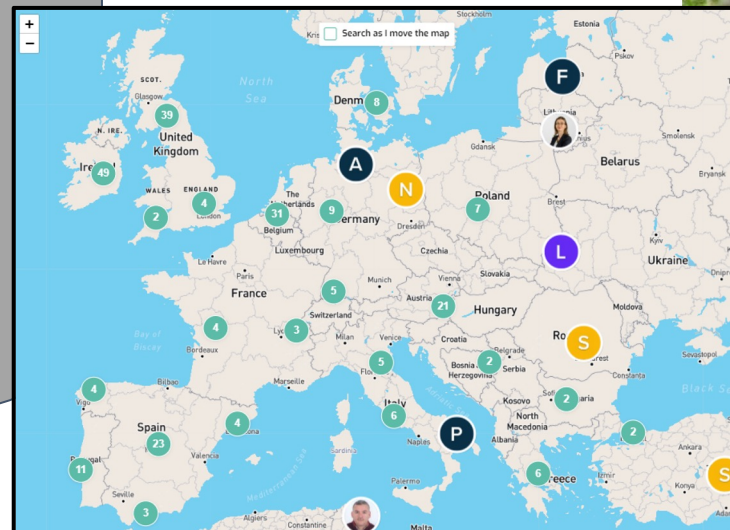
- Version 2.0 re-launched in January
- 1st accredited CPD with ILI on NBS underway
- Nature Futures: Emerging Trends for NBEs
  - Wednesday 15th March, 13.00 GMT



# 10 Communities & Members Map

1. Urban Landscapes
2. Ecosystem Restoration
3. Community Engagement
4. Regenerative Agriculture
5. Regenerative Tourism
6. Water Management
7. Green Buildings
8. Health & Wellbeing
9. Regenerative Forestry
10. Smart Tech

- Marketplace
- Network
- Hive Mind
- Best Practice
- Collective Voice
- Skills & CPD



# Nature Futures 2023

## Nature Futures 2023

### Emerging Trends for Nature-Based Enterprises

This inaugural event discusses future trends for nature based enterprises across the globe in 2023 & beyond.

From regenerative agriculture, tourism and forestry to green buildings, natural water management and ecosystem restoration, industry leaders summarise key trends influencing nature based enterprises working with and for nature.

Supported by



Connecting  
Nature  
Enterprise  
Platform

15 March 2023

13:00 GMT /  
14:00 CET

Duration:  
90mins

[Register Here](#)





## Challenges for nature-based solutions

- Measuring efficacy and monitoring – do NBSs work?
- Significant environmental / ecological / climate change
- SDGs ought to be embedded in all new infrastructure
- Shifting patterns of habitation / migration
- Growing societal concerns: health / well-being / happiness
- Management / building / design standards continually changing
- Co-financing models are adapting to the new global realities
- Moving from ‘building cities’ towards ‘city-making’ – co-design
- Consumers / citizens want multiple gains / co-creation

