



New paradigms: NGOs, community, corporate and agency partnerships for integrated catchment management

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Outline

- **Earthwatch:**
 - who we are
 - our mission
 - what we do
- **Our partners**
- **Examples**
 - FreshWater Watch
 - FreshWater Links
 - Sustainability Training Programme: Urban flooding, soil pollution and climate change research using Green Infrastructure
- **Future steps and summary**





Who we are

a non profit environmental organization focused on connecting everyday people with the world's top scientists to conduct vital field research

Our Mission

We engage people worldwide in **scientific field research** and **education** to promote the understanding and action necessary for a **sustainable environment**



Themes of interest:

Freshwater

Oceans

Climate Change

Wildlife



Creating Knowledge. Inspiring Action.

How: Citizen science

“are scientific projects where volunteers work with scientists to answer real-world questions.”

Discover

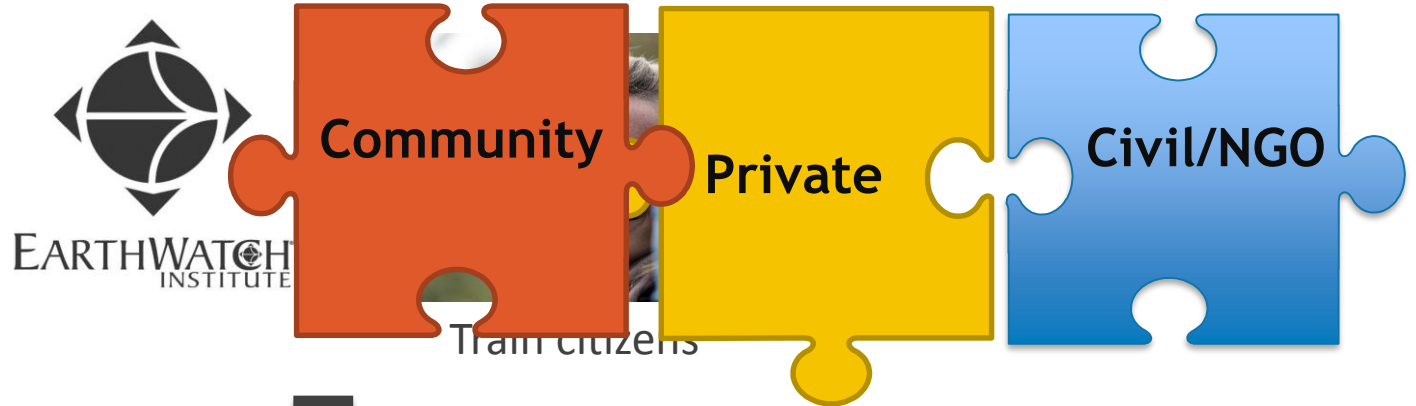
Collect

Discuss



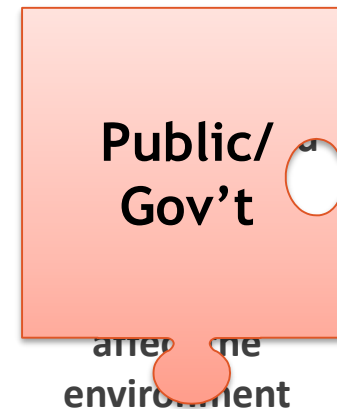
How: Citizen science

Environmental Challenge > Creation of a Programme



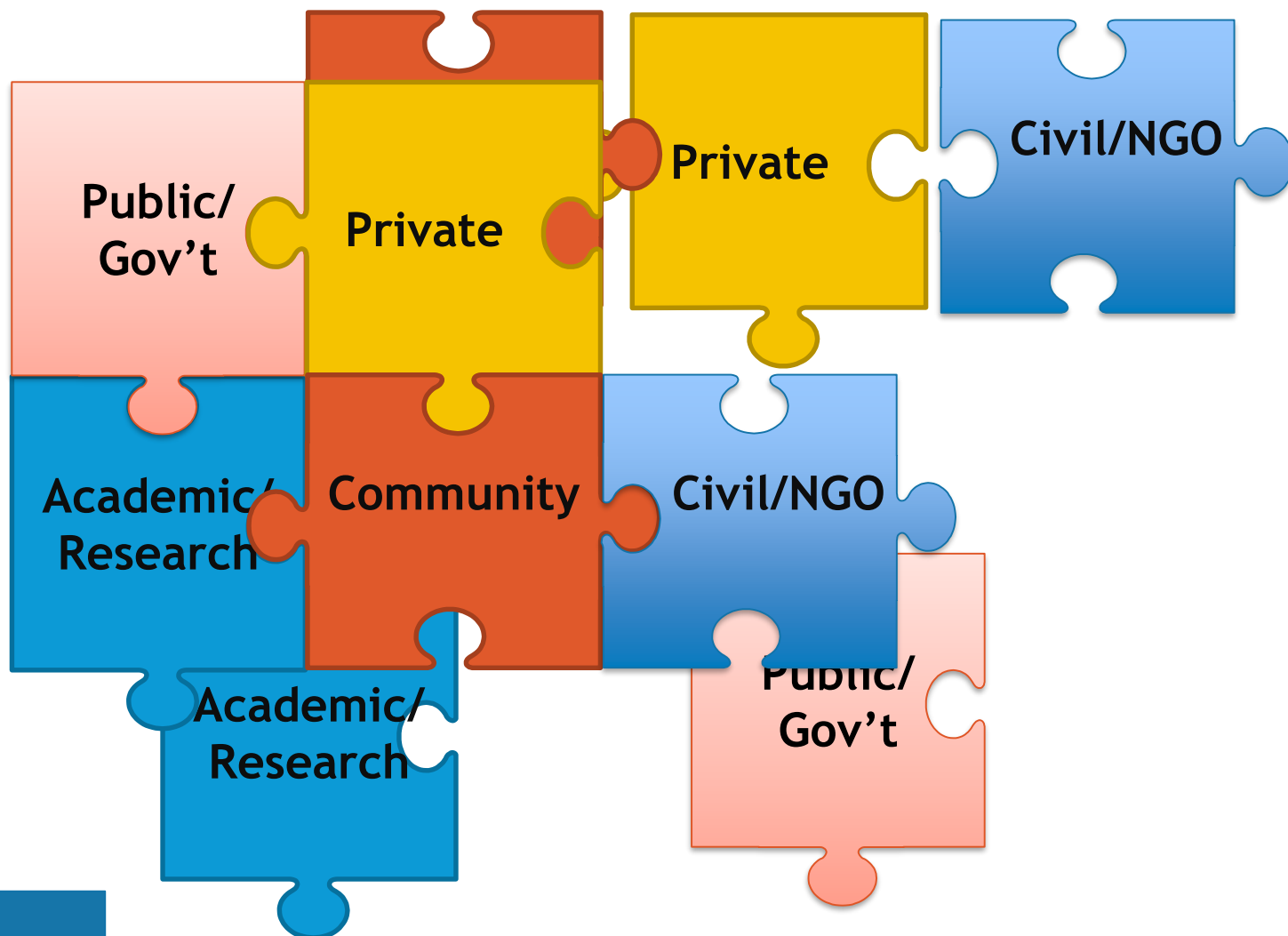
Engage people worldwide
Educate
Empower- Promote action

Enable advances
in scientific field
research



Promote and
create
sustainable
environment

How: Citizen science



Some of our Partners

Public/
Governmental



Private



Civil / NGOs



Academic



Imperial College
London



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Citizen science: Examples

EW Project	Gov	Private	NGOs	Academic	Community
FreshWater Watch	✓	✓	✓	✓	Adopt a river Blitz
FreshWater Links	✓	✓	✓	✓	
Sustainability Programme	✓	✓		✓	✓

Example 1: FreshWater Watch



A global citizen science project to research and protect freshwater resources
Focused in global water quality



More people die from poor quality water annually than from all forms of violence, including war.



As water quality declines, more than 50% of freshwater fish species are at risk of extinction.



Up to 30% of the nitrogen that is used in modern agriculture ends up in our fresh water.



A 300% rise in phosphates has led to an increase in algal blooms which can damage human health.

You can make the difference. Join our global community of citizen scientists to help promote freshwater sustainability.



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Example 1: FreshWater Watch

Community: Multiple forms of participation



Adopt a river/stream/pond/canal



Water Blitz



Employees

<https://freshwaterwatch.thewaterhub.org/>

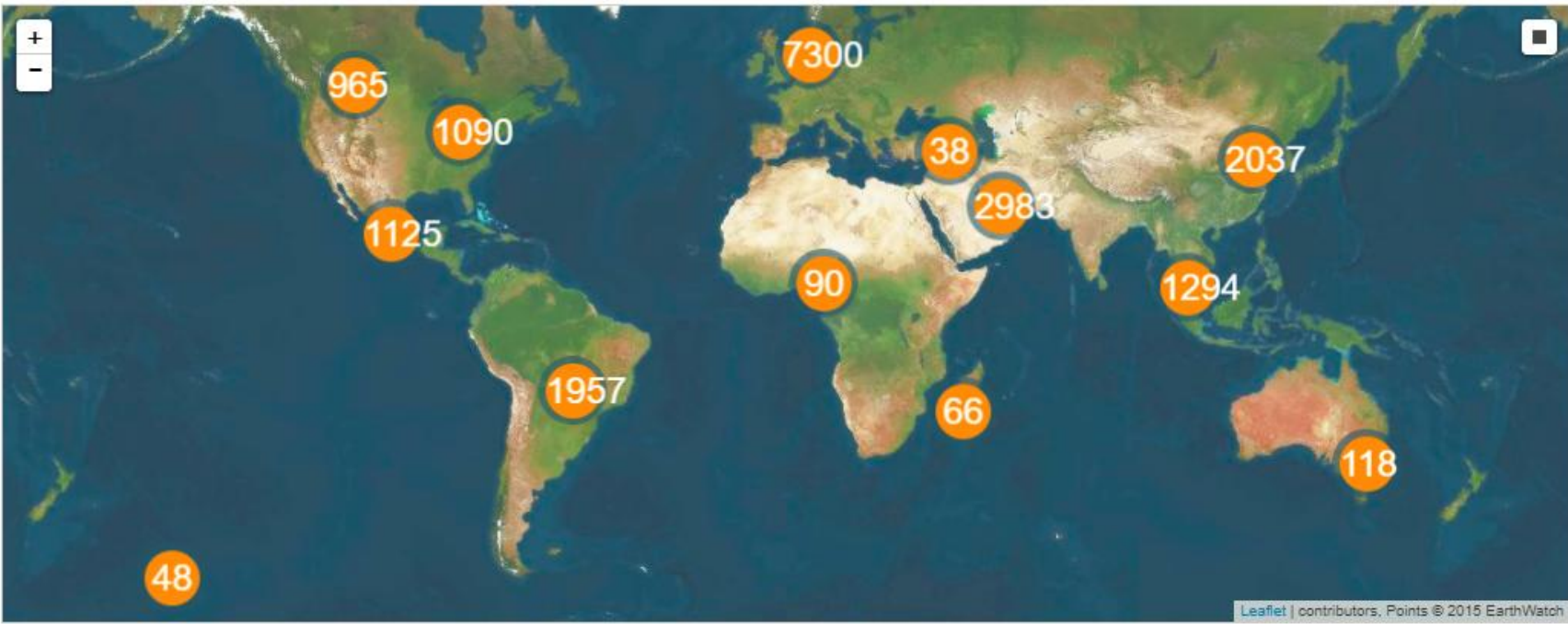


Creating Knowledge. Inspiring Action.

Example 1: FreshWater Watch



00019119 Data sets collected to date.
Welcome to the map of FreshWater Watch results.



<https://freshwaterwatch.thewaterhub.org/>

Creating Knowledge. Inspiring Action.

Example 1: FreshWater Watch



37 cities across the globe
19,000 datasets acquired
8,000 citizen scientists trained
2,500 ecosystems monitored on
6 continents
40 participating scientists
20 peer reviewed publications
in 2016 (accepted or in review)



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The power of Citizen Science: Creating an informed community



89%
Improved understanding of local & global water issues

95%
Inspired to reduce environmental impact

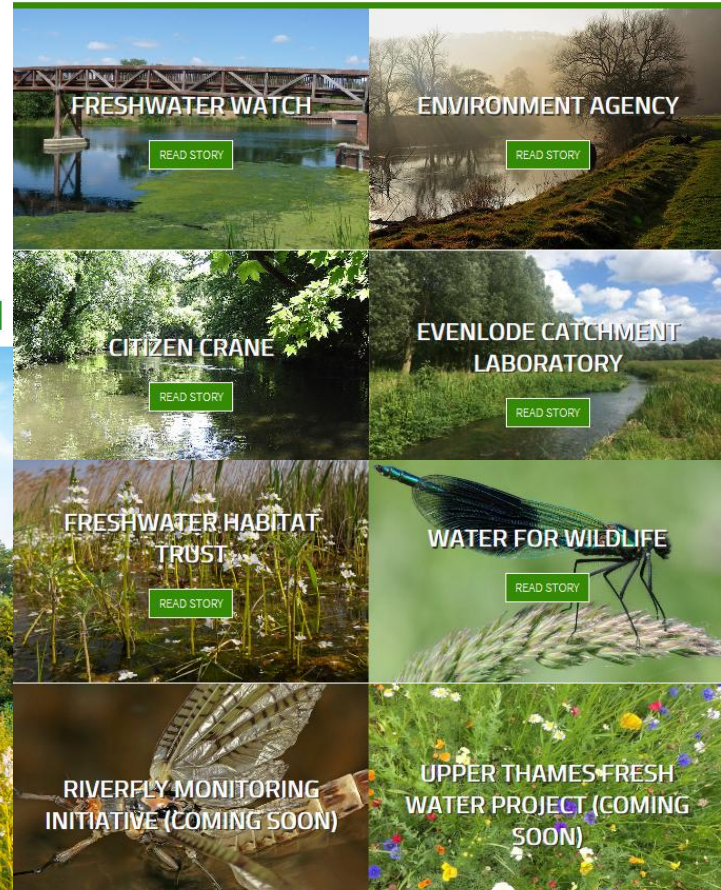
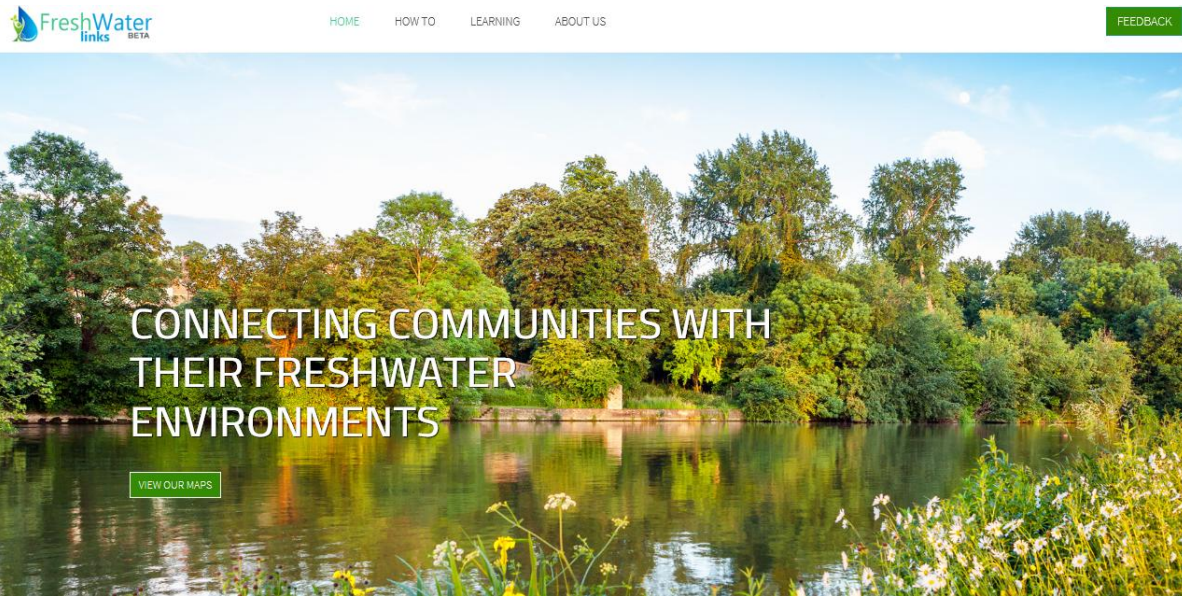
91%
Contributing to local/company sustainability programme

77%
Motivated to continue with association/company

Source: analysis based on 450 FWW citizen scientists (April 2016)

Example 2: FreshWater Links

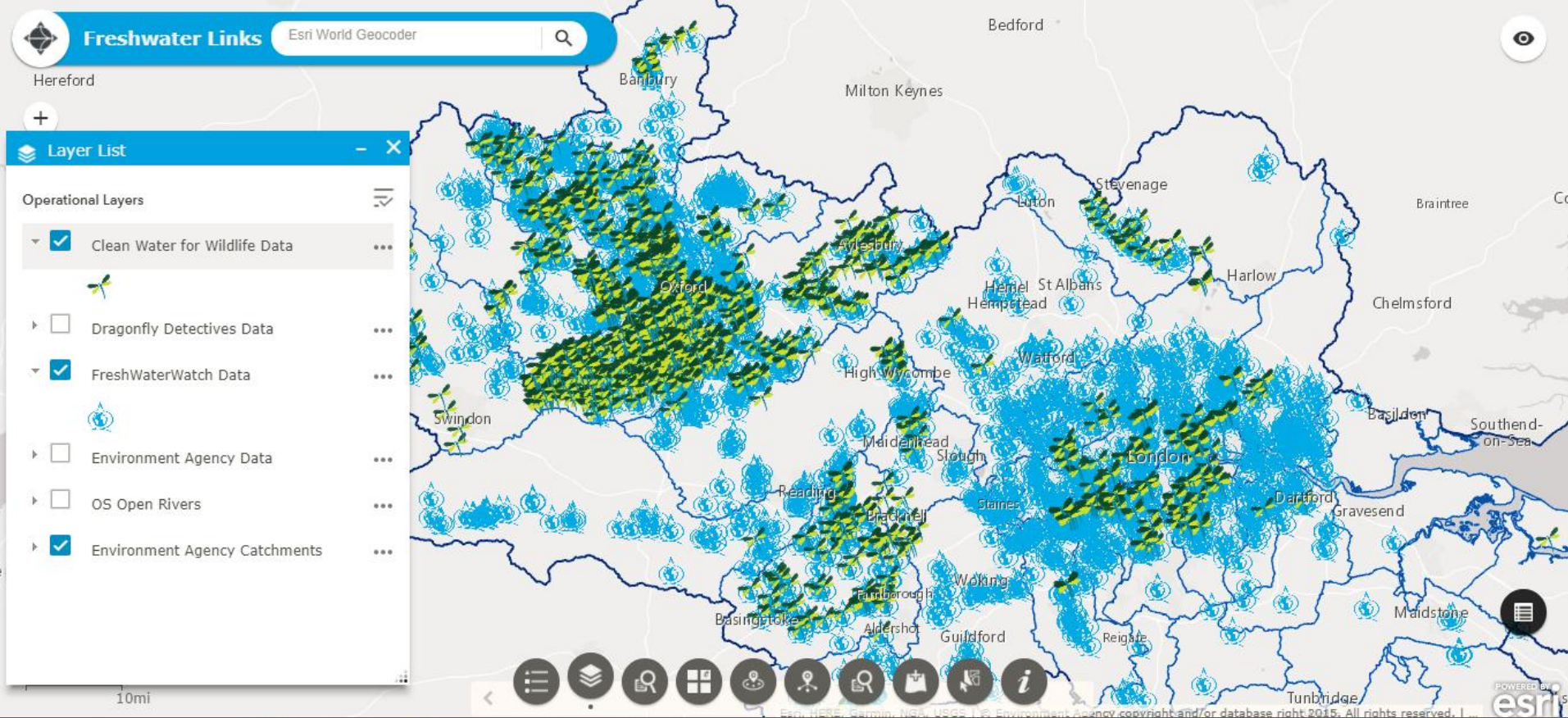
FreshWater Links will bring together multiple environmental projects with a citizen science component from across the River Thames catchment into a single online location



IN PARTNERSHIP WITH:



Example 2: FreshWater Links



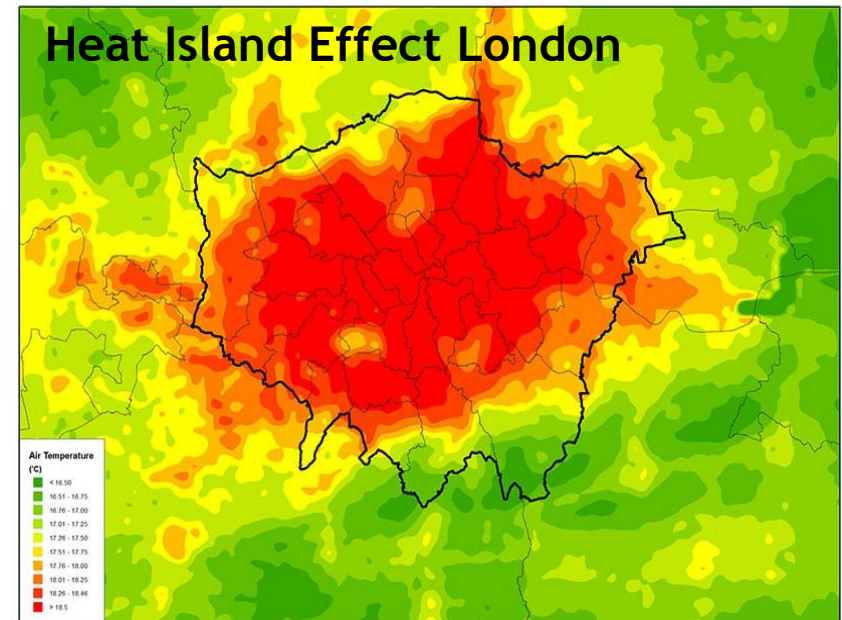
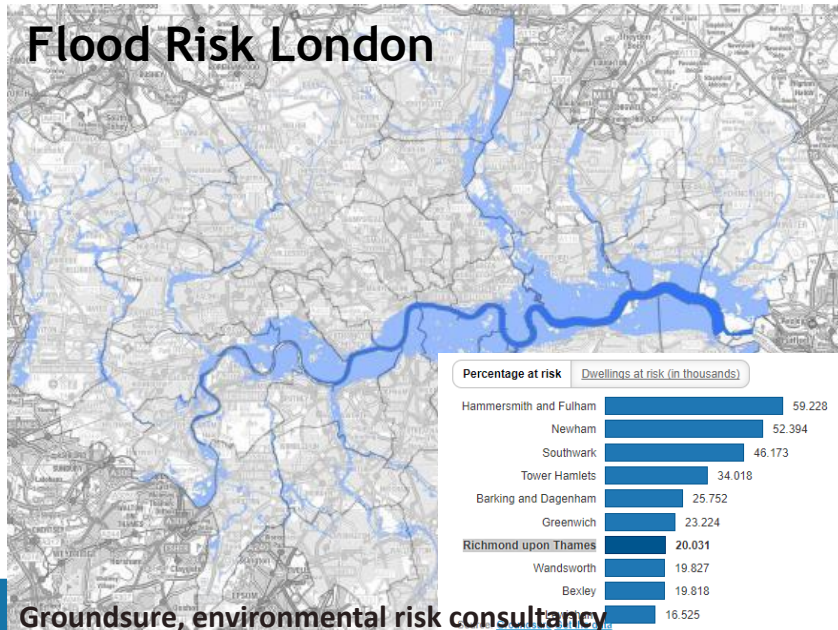
IN PARTNERSHIP WITH:



Example 3: Sustainability Training Programme

Global Programme in eight countries:
Understand key global environmental megatrends including **climate change** and **urbanisation**

Research regarding the use of **Green Infrastructure** to mitigate flooding, and urban island effect: London, Paris, Birmingham



Example 3: Sustainability Training Programme

London, Paris & Birmingham: Study of trees in two land managements to understand the best practices to facilitate the role of **Green Infrastructure** (Urban Wooded Parks)



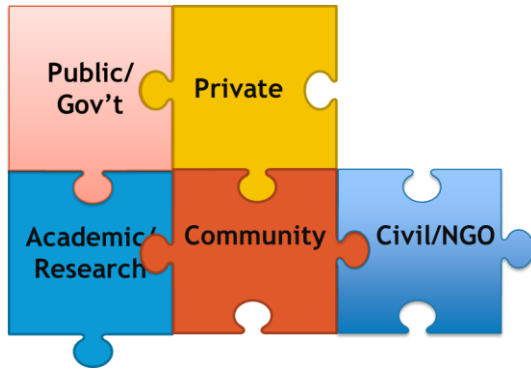
Collective efforts, partnership, interdisciplinary research and multiple/global locations to resolve modern environmental challenges of catchments

Next Steps

Collective action: citizen observatories and innovative technologies



In summary



What works: Integrative approach of Earthwatch by:

- Pursuing the **understanding/resolving environmental challenges** through **scientific** study
- Producing **research** outputs
- Understanding and meeting the **needs** and **values** of partners
- Creating **community**
- **Empowering citizens** through **experiential** learning
- **Sharing** data and platforms

Collective action to promote a more **sustainable** and participatory **water management**



Thanks

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