



EU Climate-KIC Innovation Blue Green Dream Project:

Creation of Educational experience, Communication and Dissemination

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The Blue Green Dream project

The adverse effects of climate extremes (floods, droughts and extreme heat) combined with increasing urbanisation requires a new paradigm for efficient planning and management of the urban environment.

The Blue Green Dream project will enhance the synergy between urban water systems (blue assets) and urban vegetated areas (green assets) and provide effective, multifunctional Blue Green Solutions (BGS).

The adverse effects of climate extremes are likely to increase in frequency and magnitude: poor drainage, floods and droughts, pollution of water bodies, urban heat islands, poor eco systems, energy inefficient systems.

Climate change and increasing urbanization is imposing a much more creative planning of new developments and retrofitting of the existing urban areas, in order to increase resilience to the adverse effects of CC.

In the past years, engineers, urban planners, and entrepreneurs have come up with imaginative solutions, but green and blue infrastructure assets are currently largely operating as two separate systems, without interactions and following a piecemeal approach.

To achieve this aim a major change in the existing paradigm of design and operation of urban blue and green infrastructures and systems is urgently required.

BGS – Blue Green Solutions



Examples of effective blue-green solutions are:

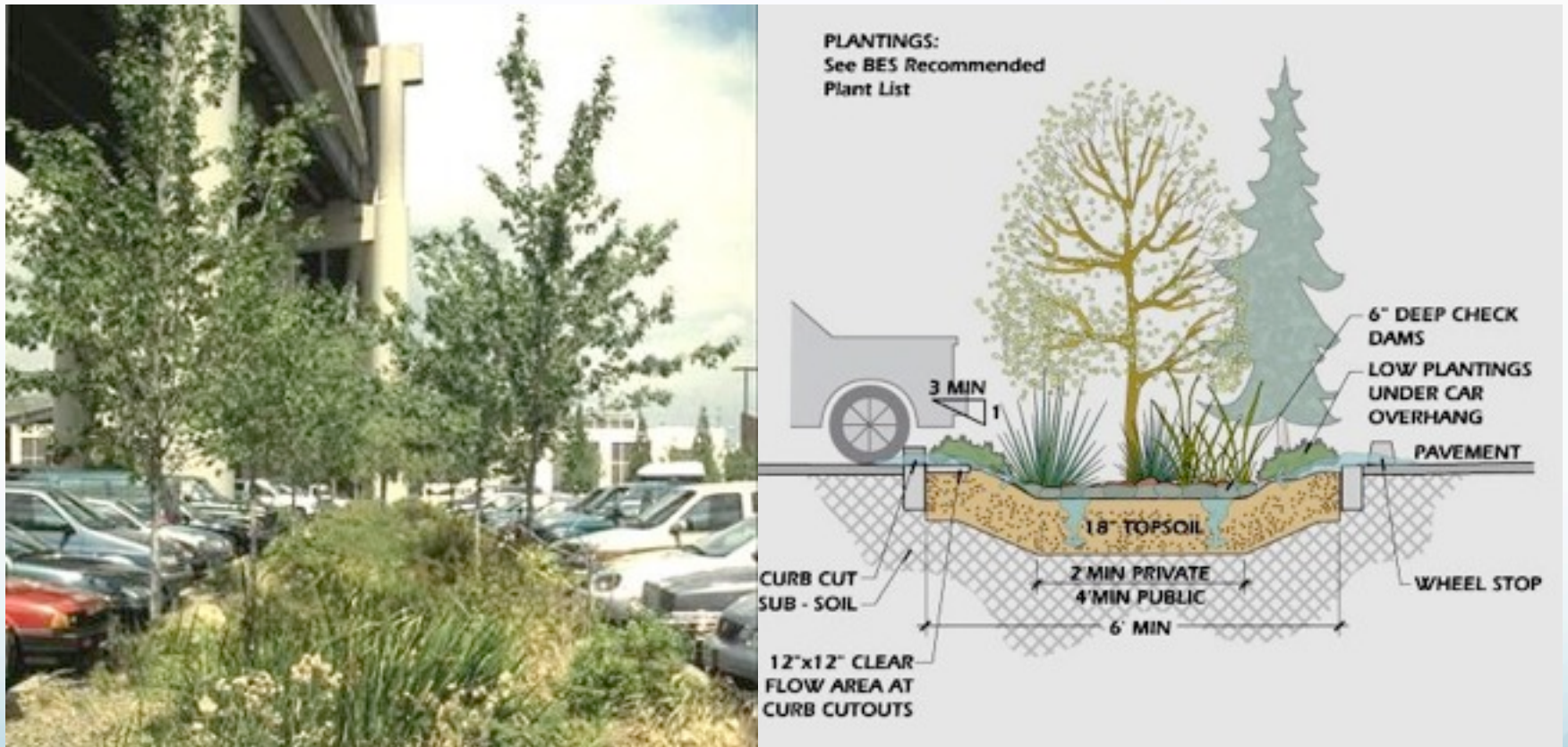
1. Urban green constructed such that it has the capacity to buffer storm water (bgs in action)
2. Blue-green solution at parking lots to avoid stormwater problems (the design is on the right and the final result is on the left)
3. Additional green elements at street level may reduce run-off peaks in sewer systems (after a test that is shown on the pictures on the right)

Some of these solutions are already applied by frontrunners, in particular USA and Australia. Most of these technologies can however be developed further to improve their performance and create extra benefits.

The initial partners of the Blue Green Project cover the North-WestEuropean metropolitan macro-region. Innovative paradigms, models, tools and methodologies will be created by sharing expertise between academic research and consultancy partners from 4 countries.

The deliverables of the project jointly developed will be tested and demonstrated in selected sites that have been established in Berlin, London, Paris, Rotterdam as a start.

BGS – Blue Green Solutions



Blue-green solution at parking lots to avoid stormwater problems (the design is on the right and the final result is on the left)

BGS – Blue Green Solutions



Additional green elements at street level may reduce run-off peaks in sewer systems (after a test that is shown on the pictures on the right)

The Blue Green Wave at École des Ponts ParisTech

Installation on the green wavy roof of three newly designed rigs for:

- (i) Monitoring of the rainfall drop size distributions and dynamics for impacts on the substratum and the pollutant mobilisation
- (ii) Monitoring of the infiltration and surface runoff processes on vegetated roofs,
- (iii) Bio-filtration monitoring

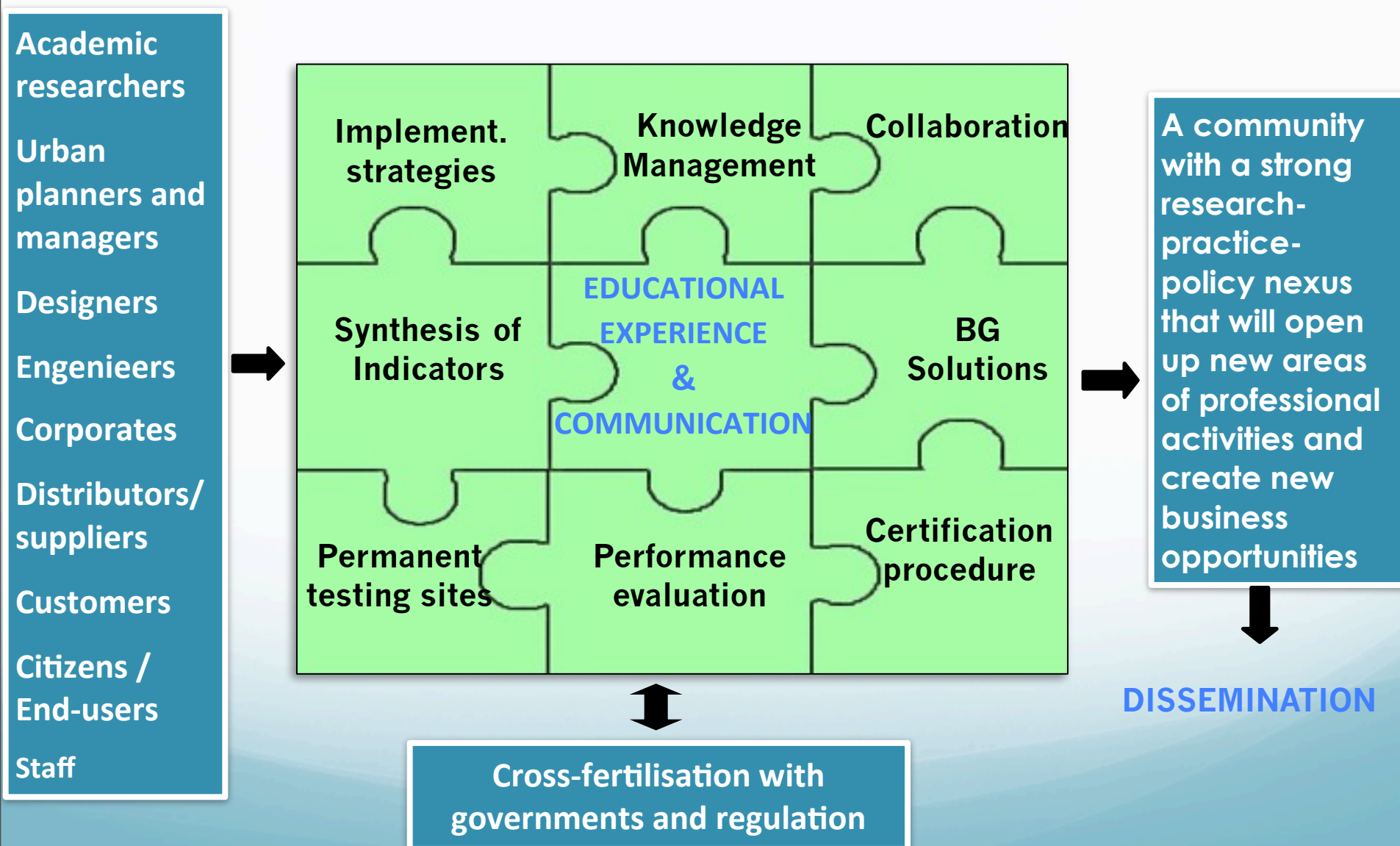


At École des Ponts ParisTech the Blue Green Wave pioneering test site will be set up: an initial decorative (“green”) design will be transformed into the BGD research oriented design.

This will include design, installation and testing of three new experimental rigs for

- (i) monitoring of the rainfall drop size distributions and dynamics for impacts on the substratum and the pollutant mobilisation,
- (ii) monitoring of the infiltration and surface runoff processes on vegetated roofs,
- (iii) bio-filtration monitoring.

A Blue Green Community



The project addresses its challenges by bringing stakeholder together in innovation practices and by linking blue-green assets at various scales across urban areas.

Such a challenge requires a major integration among different approaches and disciplines, as well as among professionals from the private and the public sector, administrators and citizens. Therefore, BGD aims to create a Blue Green community economically self-sufficient.

The project strategy relies on strong interactions of academic and business partners. This strategy consists in developing methodologies, technologies and tools that, during the project period, will be tested and implemented in a cluster of full scale projects. These projects will cover urban design and the development of procedures as well as business development and job creation. This set of actions should result in a significant uptake and turn into a strong network of global partnerships for multiple post-project applications, business development and new jobs.

(You acknowledge that) Education, communication and dissemination are key factors first to enhance the synergy between urban blue and green systems and second to provide effective and multifunctional Blue Green Solutions (BGS) to support the urban adaptation to the future climatic changes.

An educational experience supported by:

- An **E-learning interactive platform** that can facilitate: standardized delivery of content, lower costs, real-time access, freedom to fail, personalized learning, ongoing contribution and access to resources, non-linear navigation, case studies and scenarios, access to needed information
- **Training sessions** for capacity building in BG solutions design for the BG community
- A **social networking infrastructure**

We want the learner to become active!

- The e-learning platform will include:
 - **Branched navigation** that gives the opportunity to personalize the learning and is more adequate to the complexity of real world
 - **Case studies and scenarios** that allow to mix e-learning with real-world activities. E-learning scenarios will be developed in collaboration with Numerical University of Engineering and Technology.
 - **The Moodle** (Modular Object-Oriented Dynamic Learning Environment) **application** that will be used to create effective online learning sites
 - **Scenari Opal** – editorial chain for the production of learning material and academic documents
 - **Tutors' support** in e-learning
- Demonstration sites will be used in training sessions on BG solutions

Communication and dissemination



Communication and Dissemination is a permanent point in the agenda of the project.

In order to support the creation of a BG community, stimulate the interest of stakeholders and create new business opportunities, we had to develop a new common language understandable to anyone: different professionals, stakeholders, policy makers and citizen. This simple but very effective brand will distinguish BGD from any other green business.

The logo: the shape suggests the circulation of elements in a closed cycle, then you can see the watertank and the drop. As you can see BGD will communicate with end-users, at Mrs. Brown's house level.

"In the pursuit of the Blue Green Dream": this slogan points out that we want to encourage people to believe in an ambitious project that will improve everyone's life. Nevertheless, we will not make a promise that we cannot keep. The concept and potentials of the BGD project have raised an unexpected huge interest among all the stakeholders as well as among the potential users of the products and services. This enthusiasm could however result in an over-expectation. Therefore, in our communication strategy, we will carefully manage expectations, by communicating the results of our analyses and our testing activities to a wide audience. We will report factual information and practical experiences, rather than claim unrealistic performances of our BG solutions.

Lessons learnt from a parent project: Interreg NWE IVB RainGain



- Lack of awareness among the general public
 - Technical contents
 - communication as a reporting burden
 - Uncertainties in the research work and open issues
 - Potentially competing objectives among partners and diverging approaches
- ✓ Make links with visible issues and use story telling with testimonies
 - ✓ Focus on what is the concrete added value for your audience
 - ✓ Anticipate, develop a strategy and plan communication activities
 - ✓ Narrate the research work as a challenge
 - ✓ Circumscribe a common ground and shared objectives or create several sub-groups among partners

The European Interreg project **RainGain** has strong links with BGD and is at a more mature stage. The aim of the RainGain project (www.raingain.eu) is to develop new solutions – based on the most recent developments in X-band radar technologies – to help the urban water authorities to cope with pick rainfall and prevent the severe pluvial flood damages of the last decades. At present, the Rain Gain Project is already providing important lesson learnt than can be of help in overcoming the difficulties that could affect the communication strategy of BGD project.

- Difficulties to create awareness among the general public > can be overcome through story telling and testimonials
- Low visibility of flood problems and solutions > can be overcome through links with more visible issues
- Very technical contents > can be overcome through focus on its concrete added value
- After the project starts, communication can become an additional reporting burden rather than an action supporting the achievement of research goals This difficulty > can be overcome anticipating, developing a strategy and planning communication activities
- The difficulty to communicate in a simple and positive way uncertainty in research work and its open issues > can be overcome narrating the research work as a challenge not as an achievement, creating suspense
- The difficulty to align potentially competing objectives of partners and to merge diverging approaches > can be overcome circumscribing a common ground and sharing objectives or creating several sub-groups of partners

<http://bgd.org.uk>



Thank you!