REGREEN
NATURE-BASED SOLUTIONS

A methodology for identifying areas with high renaturation potential

Policy Recommendations

- Renaturing is often confused with desealing, which involves restoring the permeability of topsoil, often using porous drainage pavements.

- Renaturing involves restoring the entire ecosystem (soil, flora and fauna)

- Renaturing relies on knowledge of ecology and awareness of all levels of biodiversity (genetic, specific and ecological).

- Involving the community in renaturing projects helps residents to accept them and make them their own, ensuring their long-term success.

This brief provides information about a methodology for helping the identification of mineralised sites that could be used for renaturation operations.

All cities, decisions makers, urban planners, NGOs etc. can use this approach. It has been developed to be replicable for different urban contexts and cities. Just follow the step-by-step method. The criteria and data used in the methodology may be enriched or supplemented according to the issues of the local context and to the data available. The online publication of interactive maps can be done with many GIS tools: arcGIS, QGIS, etc.

Why a methodology for renaturing?

Our cities are full of areas that have been concreted or asphalted over and where nature could potentially return and flourish. We propose a method that will help local authorities:

- to target urban areas where renaturing represents a key strategy.

- to identify mineralised sites that could be used for renaturation operations.

Before and after opening up the river in a densely built-up area of Sarcelles (Paris Region, France). © SIAH Croult et Petit Rosne.

Impact

Many applications can be derived from this analysis. At their own level, local authorities can use it as inspiration to work towards the No Net Land Take objective and define "areas to be renatured" in their urban planning documents. In addition, the application of the methodology can encourage local authorities to implement more coherent renaturation strategies for their entire territory. The method can also feed the "Avoid, Reduce, Compensate" sequence and help project developers to identify mineralized sites that can accommodate compensatory measures, thus contributing to a higher gain.
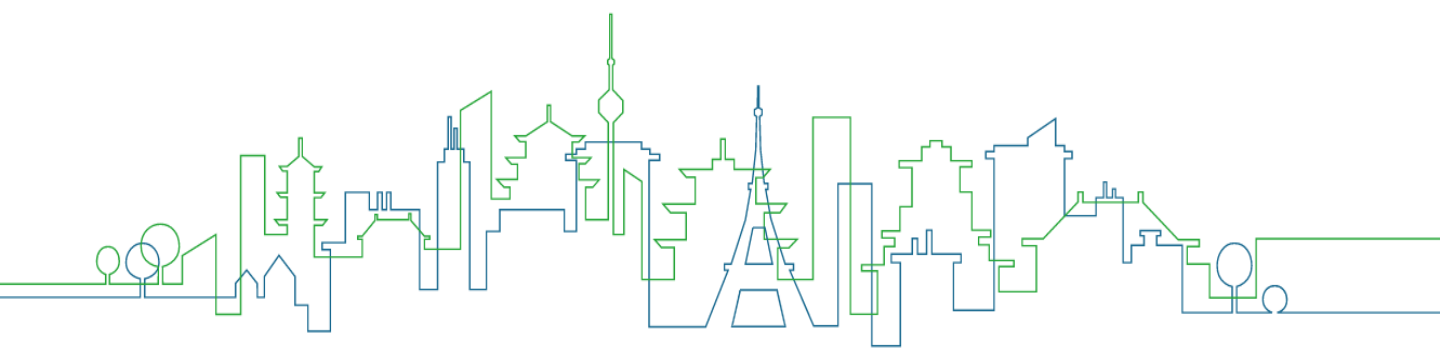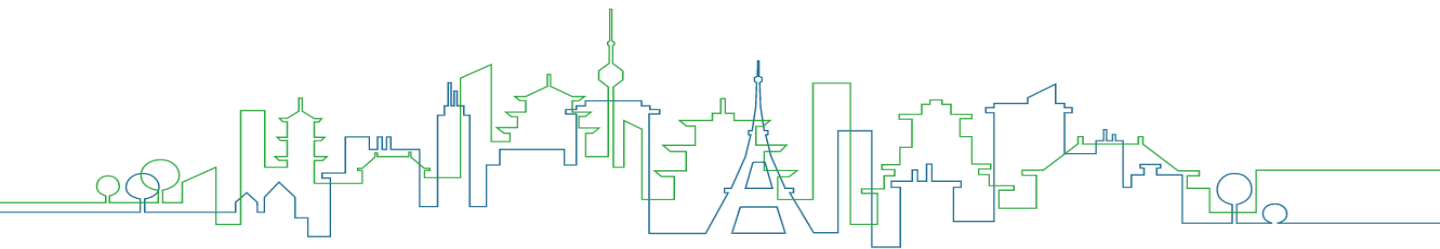
Approach

The method described here is based on three key challenges that make it possible to locate these urban areas:

- Restoring biodiversity on targets areas that are deficient in terms of biodiversity, by studying the size of green spaces; the type of plant cover; the presence of rare habitats; and ecological connectivity.

- Adapting to climate change on target areas exposed to climate risk: river flooding, runoff and urban heat islands.

- Improving human health and the living environment on targets areas that are vulnerable because of lack of green spaces, air pollution and health problems relating to urban heat islands.

This first step makes it possible to identify areas where the potential for renaturing is high, but it does not pinpoint sealed sites that could be renatured. To do this, potentially desealable/renaturable sites (school playgrounds, car parks, areas of waste ground, public squares, etc.) were listed based on the land use classification guidelines.

Results

The Regreen method has been applied at the scale of the Paris Region. It helps local authorities to map areas at risk on a scientific basis and to identify mineralised sites that could be used for renaturation operations. The methodology makes it possible to estimate the amount of potentially desealable and renaturable land. All the results are available online in the form of interactive maps.

Do you know that...

… the REGREEN project published the guide Renaturing cities: method, examples and recommendations in English, French, Danish and Croatian

You will learn about where and how to restore nature in cities. This guide will be a useful tool with the forthcoming EU regulation on nature restoration.
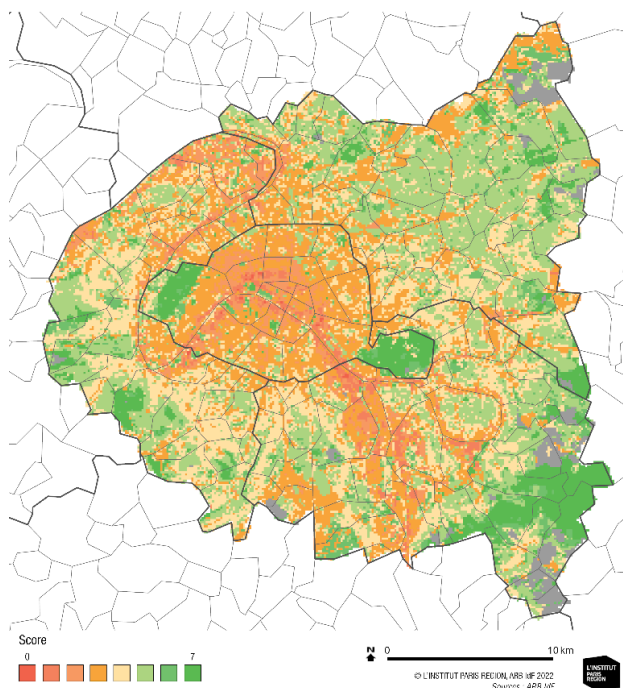
Overall map of exposure to the effects of climate change for Paris and the inner suburbs. The higher the level of renaturation required, the lower the score (red) © Institut Paris Region

Authors

Gwendoline Grandin

Contributors

Marc Barra

You want to know more?

REGREEN webpage
www.regreen-project.eu

REGREEN repository zenodo
https://zenodo.org/communities/regreen