



# URBAN HORTICULTURE IN BOLOGNA

## A key role for research and training



G. Prosdocimi Gianquinto and G. G. Bazzocchi - ResCUE-AB  
*Research Center in Urban Environment for Agriculture and Biodiversity*  
*Department of Agricultural Sciences*  
*Alma Mater Studiorum, University of Bologna*





# Research Center in Urban Environment on Agriculture and Biodiversity



**RESCUE-AB** aims at turning the city into a **diffuse eco-laboratory**, where research activities may take place, linking together the different experiences of urban horticulture and ecology, from the historical urban social gardens, to the recent initiatives of roof gardens, from the community horticultural experiences to the school gardens, toward the global aim of creating a network of green corridors across the city.

**RESCUE-AB** aims at promoting, within the already present, currently built and future city green infrastructures, researches in the fields of:

- social and sustainable urban horticulture;
- soilless systems;
- urban biodiversity and agro-ecology;
- urban beekeeping;
- organic pest control in the urban environment ;
- quality of urban vegetable crops.

The center also include the **Code-crop**  
**Development for Crop Sciences.**



Laboratory of **Cooperation** for



# Experiences of Urban Horticulture in the South of the World













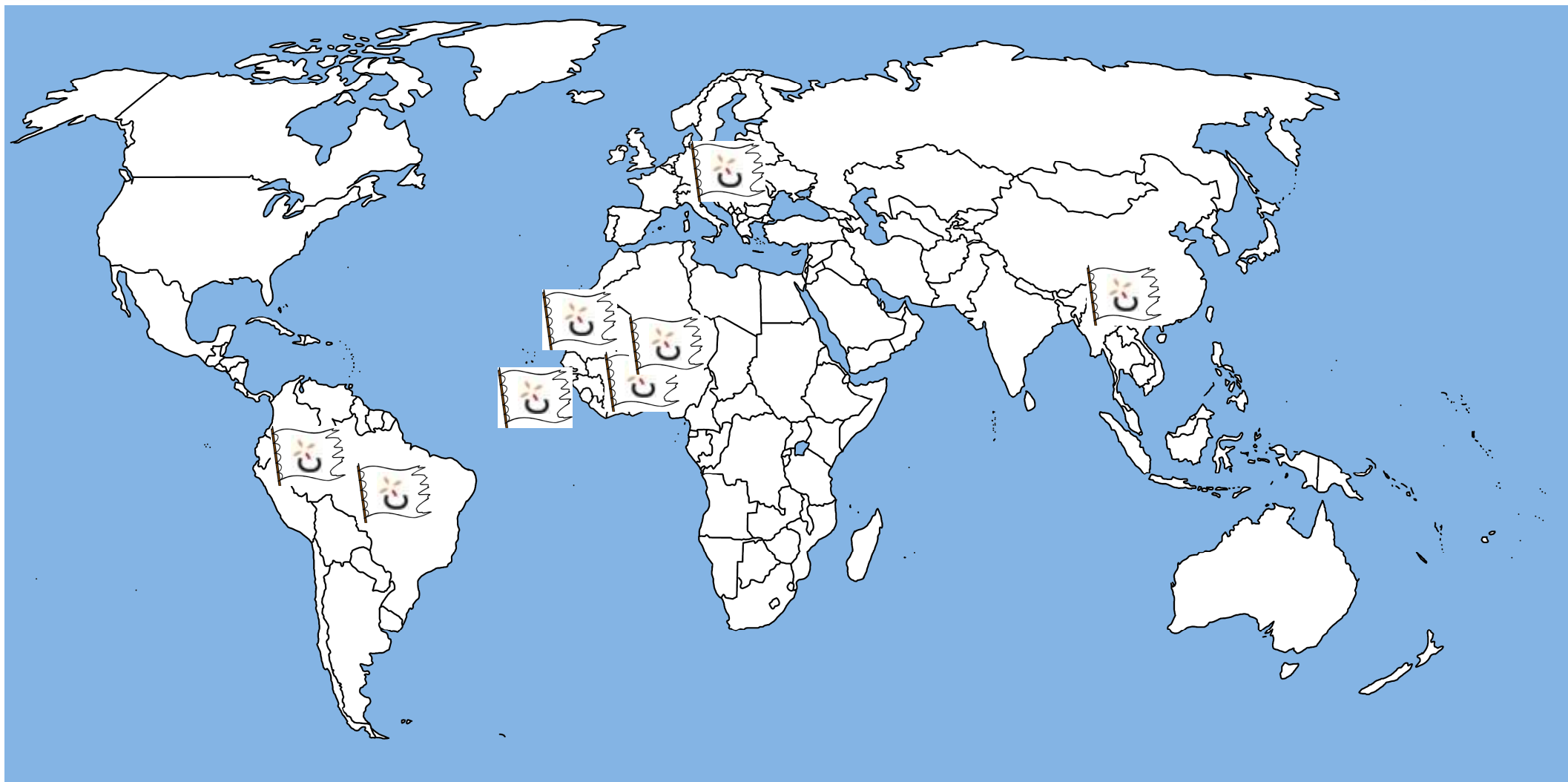




# Tagant, Mauritanie



# Current and past urban horticulture projects of UNIBO



Teresina and Salvador, Brasile  
Ouagadougou, Burkina Faso  
Assaba, Tagant e Hod el Chargui, Mauritania

Trujillo and Lima, Perù  
Yangon and Dry Zone, Myanmar  
Ilha de Santiago, Cabo Verde

Abidjan, Costa d'Avorio  
Bologna, Italia



# Gardens, in our cities





# ... Simplified hydroponic systems for home vegetable production ...



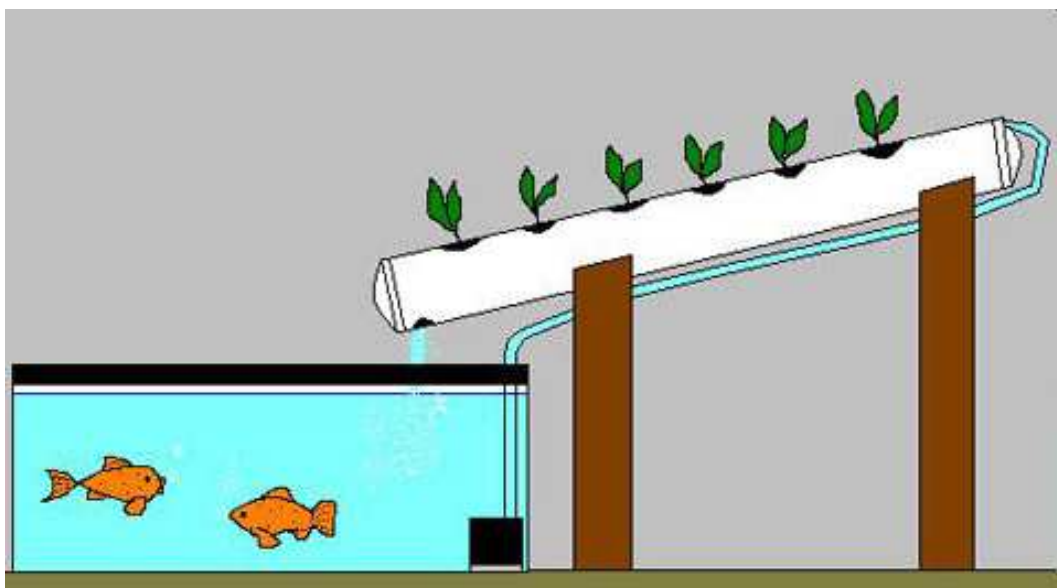


# ... including vertical gardens ...





# ... and aquaponics





# Social housing buildings, via Gandusio, Bologna























# Schoolyard garden, vertical garden



**Recycle materials**  
**Reduce the waste of**  
**water**





# Schoolyard garden, aquaponic garden







# Schoolyard garden, biodiversity garden



Increase biodiversity  
Pollinators





# Schoolyard garden, Small wind turbine and photovoltaic



Sustainable energy





# The aromatic garden between blocks of flats in popular neighbourhood

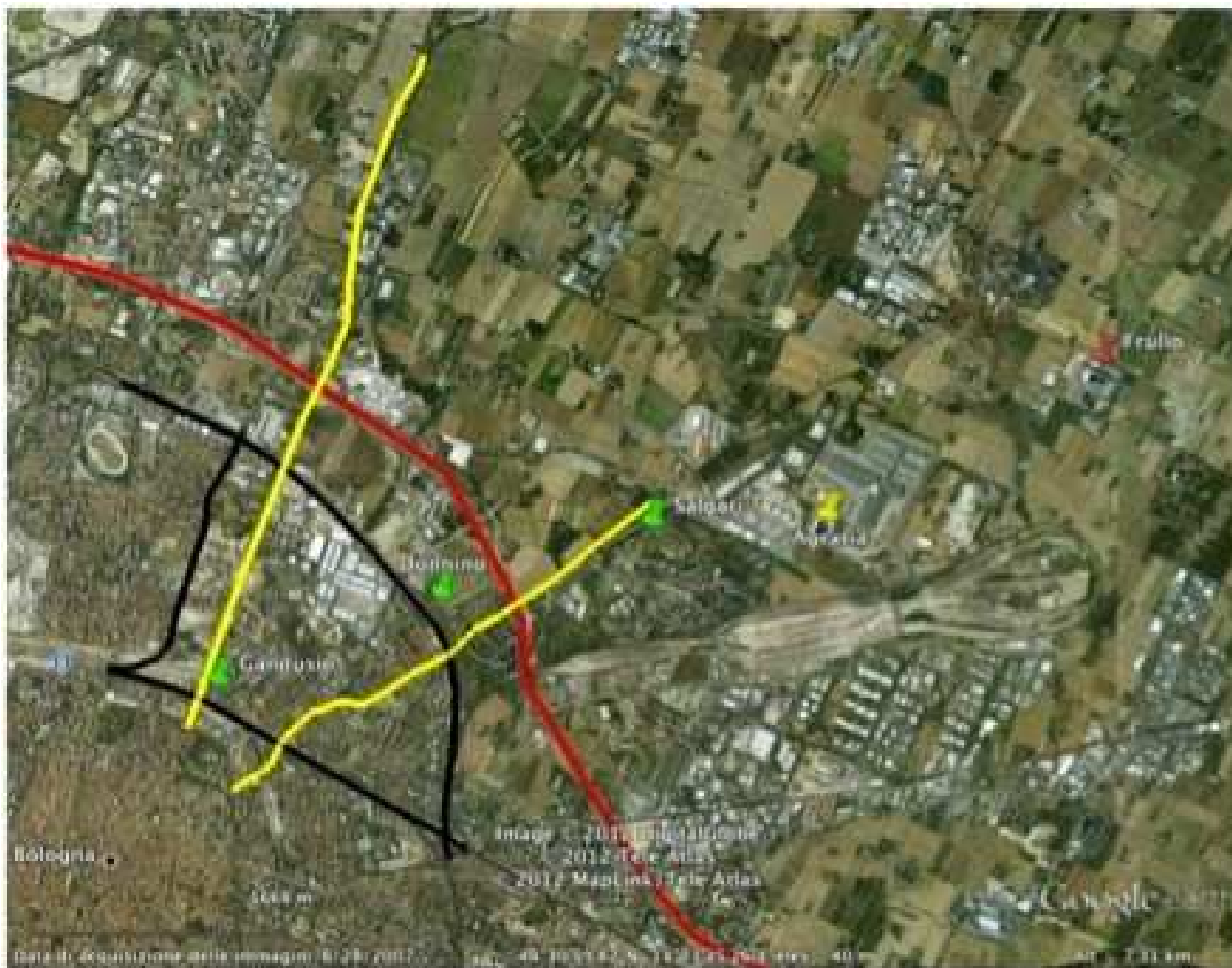








# Studies on the physiology and quality of urban grown vegetables





**HORTIS** –Project funded with the support of the European Community within the framework of the **Lifelong Learning Programme**, sectorial programme **Grundtvig** for adult education.

**HORTIS** is coordinated by the Department of Agricultural Sciences of the University of Bologna (Italy) and it includes partners from several European Countries:



Germania: Workstation ideenwerkstatt berlin e.V.



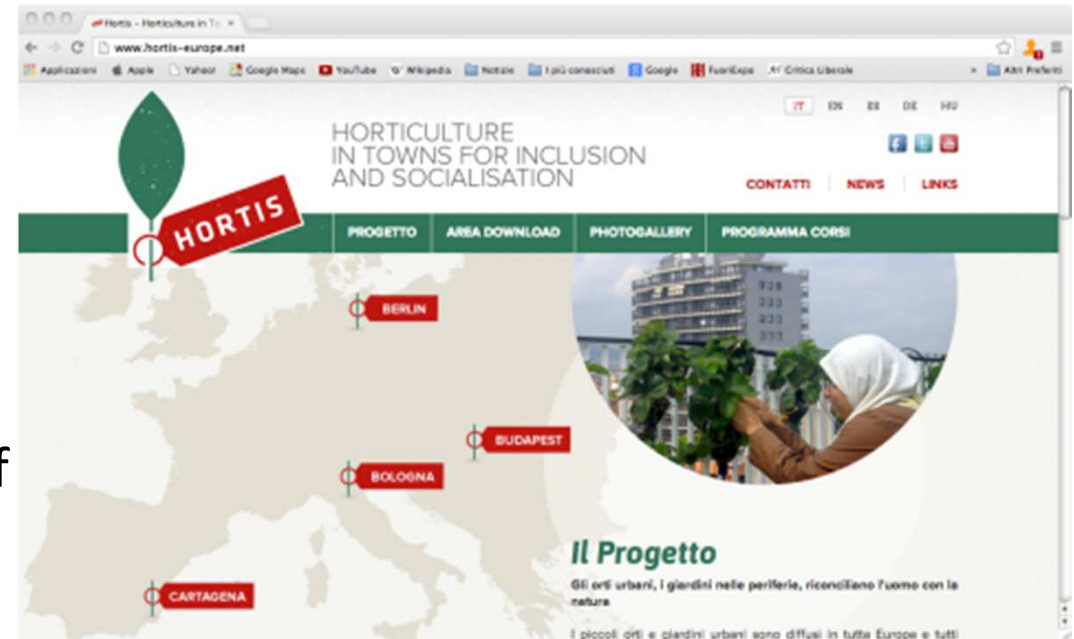
Ungheria: Corvinus University of Budapest e Magyar Biokultúra Szövetség



Italia: Horticity, Mammut Film e Amitié



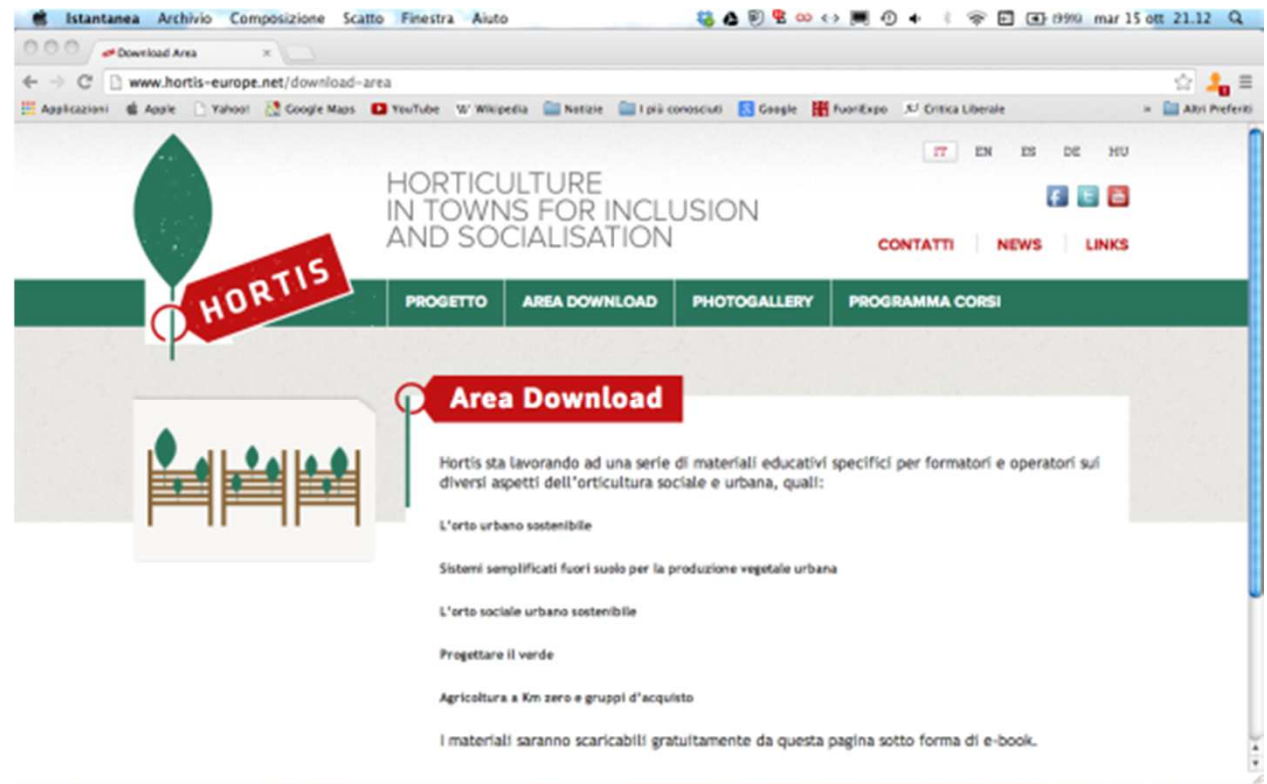
Spagna: Universidad Politécnica de Cartagena e Fundación Tierra Integral





**HORTIS** aims at the following objectives:

- ❖ To develop a set of educational material on the various aspects of urban and social horticulture.
- ❖ To organize training courses for trainers on the subject of urban horticulture in the cities of Bologna (IT), Berlin (DE), Budapest (HU) and Cartagena (ES)
- ❖ To organize pilot courses on gardening and urban horticulture for adults
- ❖ To create a web multilingual and interactive portal for the diffusion of the educational materials developed within the project and encourage the communication and collaboration among the different users



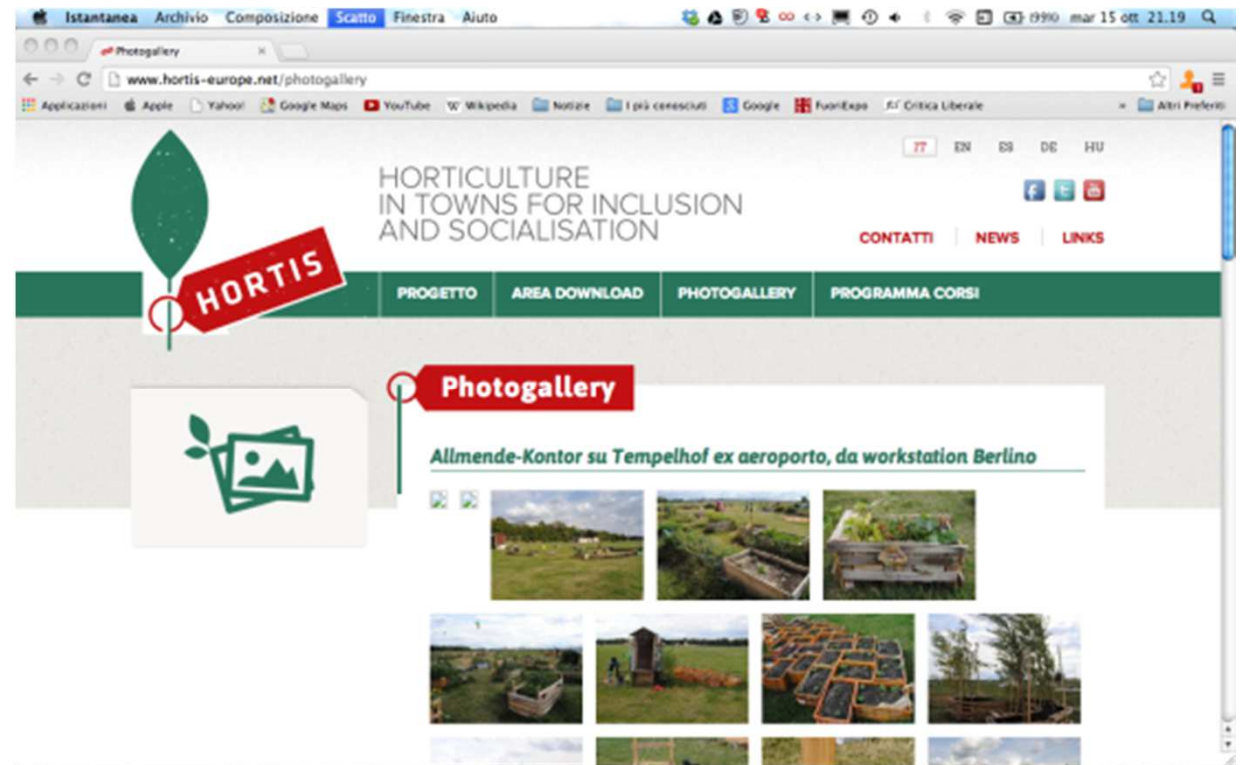


**HORTIS** develops **educational material** that are intended to serve everyone, such as:

- ❖ **Practical tutorials** such as short videos
- ❖ a set of illustrated and easy to use “**cards**”, with photos and drawings on the main steps from soil preparation to harvest.

**HORTIS** will also produce specific **educational material** for **TRAINERS** and specifically manuals on:

- ❖ The sustainable urban garden
- ❖ Soilless systems for urban vegetable production
- ❖ Social urban horticulture
- ❖ Urban garden cultivation systems
- ❖ ZeroKM agriculture





**HORTIS** also aims at the promotion of urban and social horticulture through a variety of actions and activities such as:

❖ Organization of events in each country and city involved:

- Promotional events
- Dissemination events
- International conference

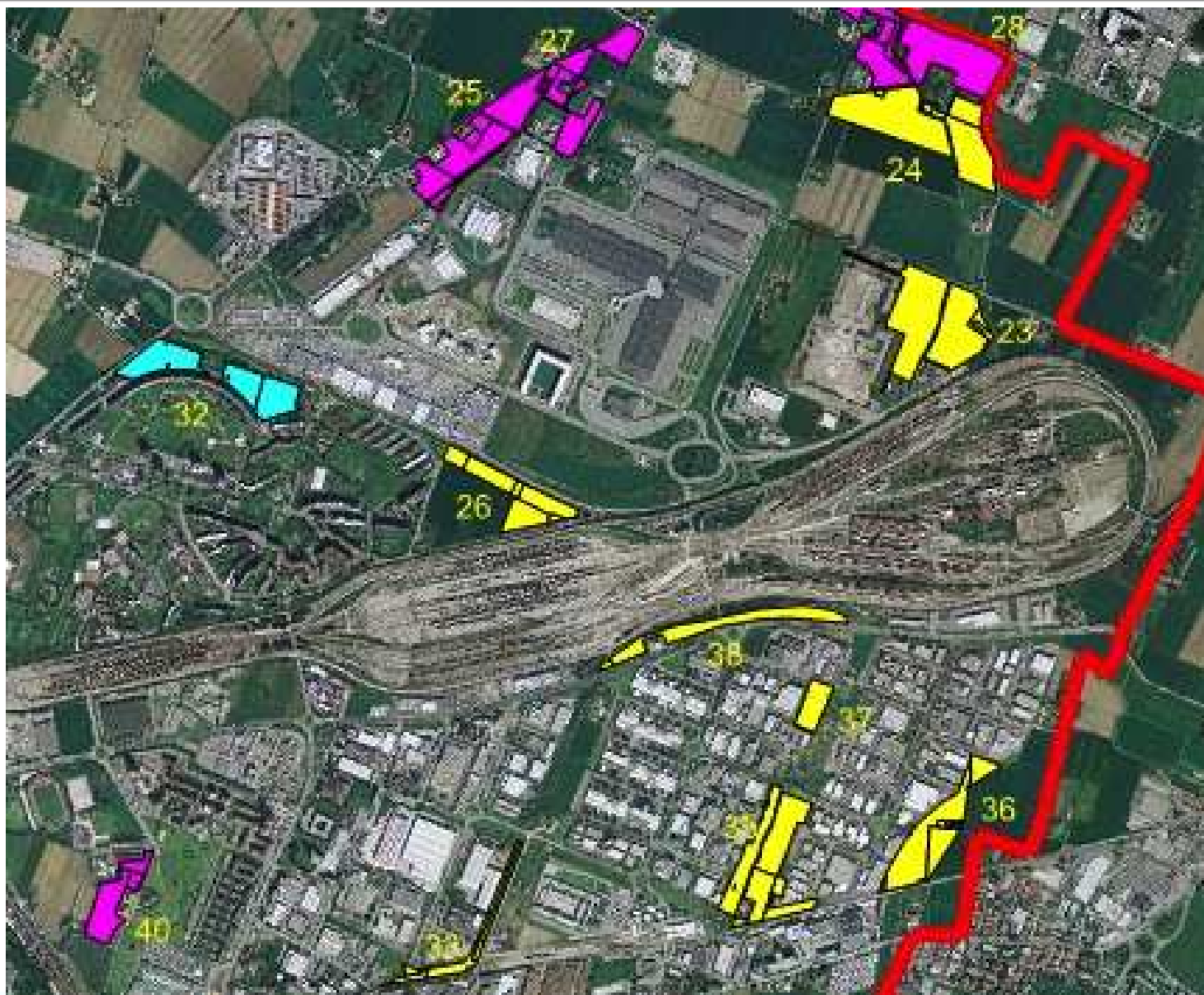


- ❖ Promotion of the collaborative opportunities among those that are interested in urban and social horticulture
- ❖ The production and diffusion of a video and promotional tool-kit, including a DVD, on how to create a urban garden and a kit of seeds.

**HORTIS** last 2 years, from January 2013 to December 2014.

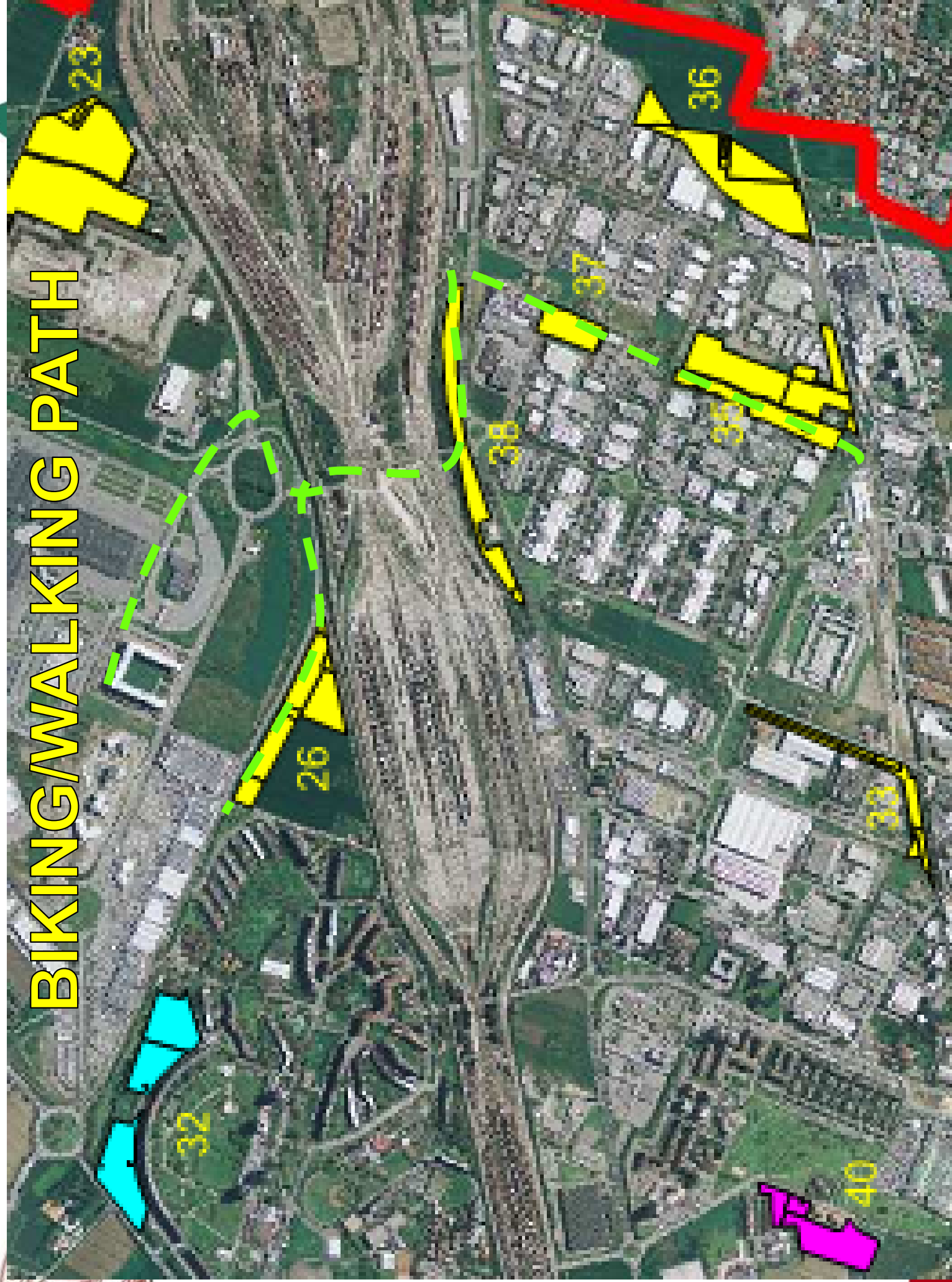


# The next project for Bologna





# BIKING/WALKING PATH







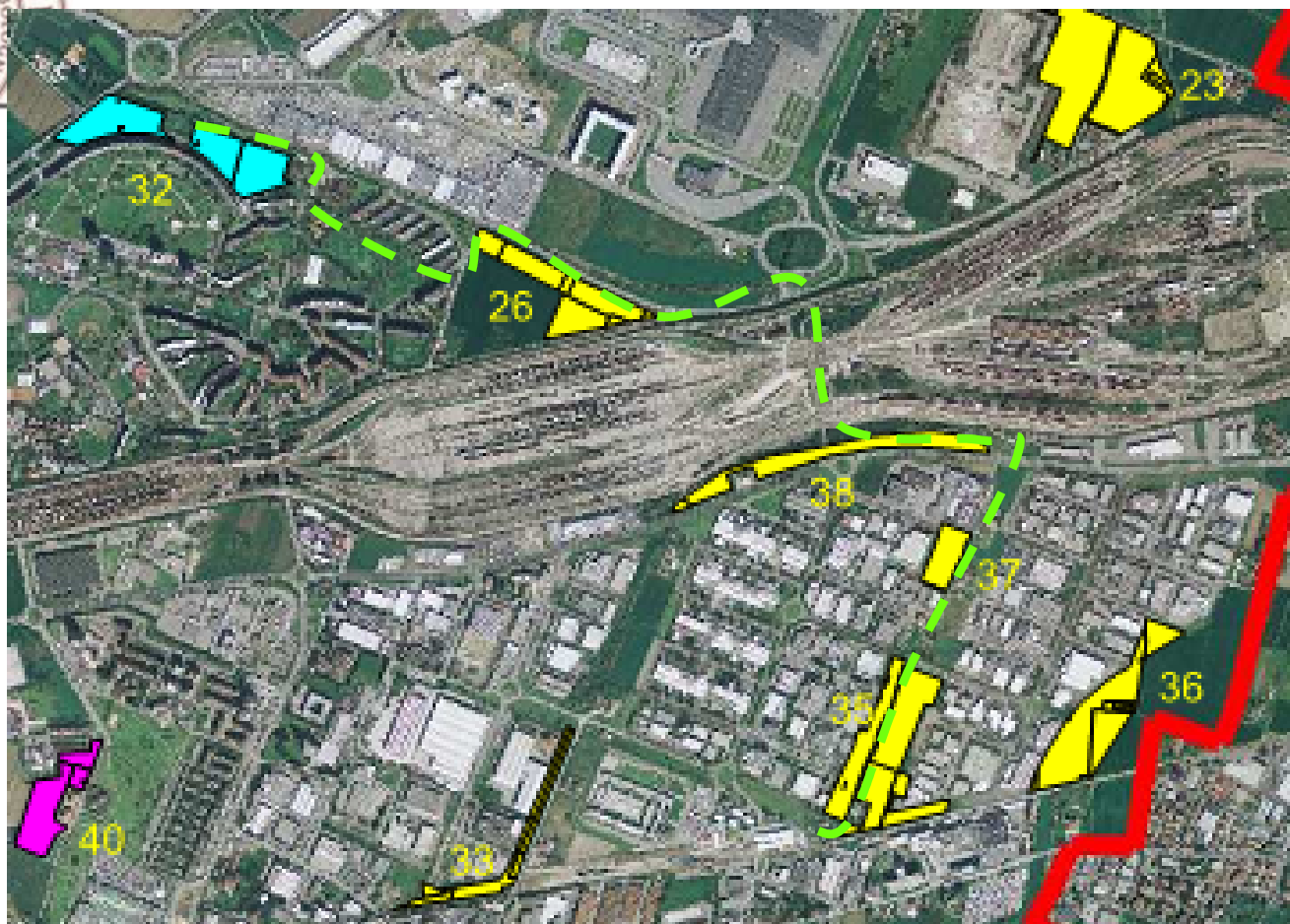
Community garden

Urban microfarm system





# Smart gardens way



Training

Biodiversity



Urban ecology







**Urban beekeeping**



**Urban viticulture**



**Ergonomic gardens**





# The smart gardens way



*Il Virgolone con Serra (The virgolone greenhouse). Antonio Scarponi / Conceptual Devices,, elaborated from a photo by Francesco Calzolari.*

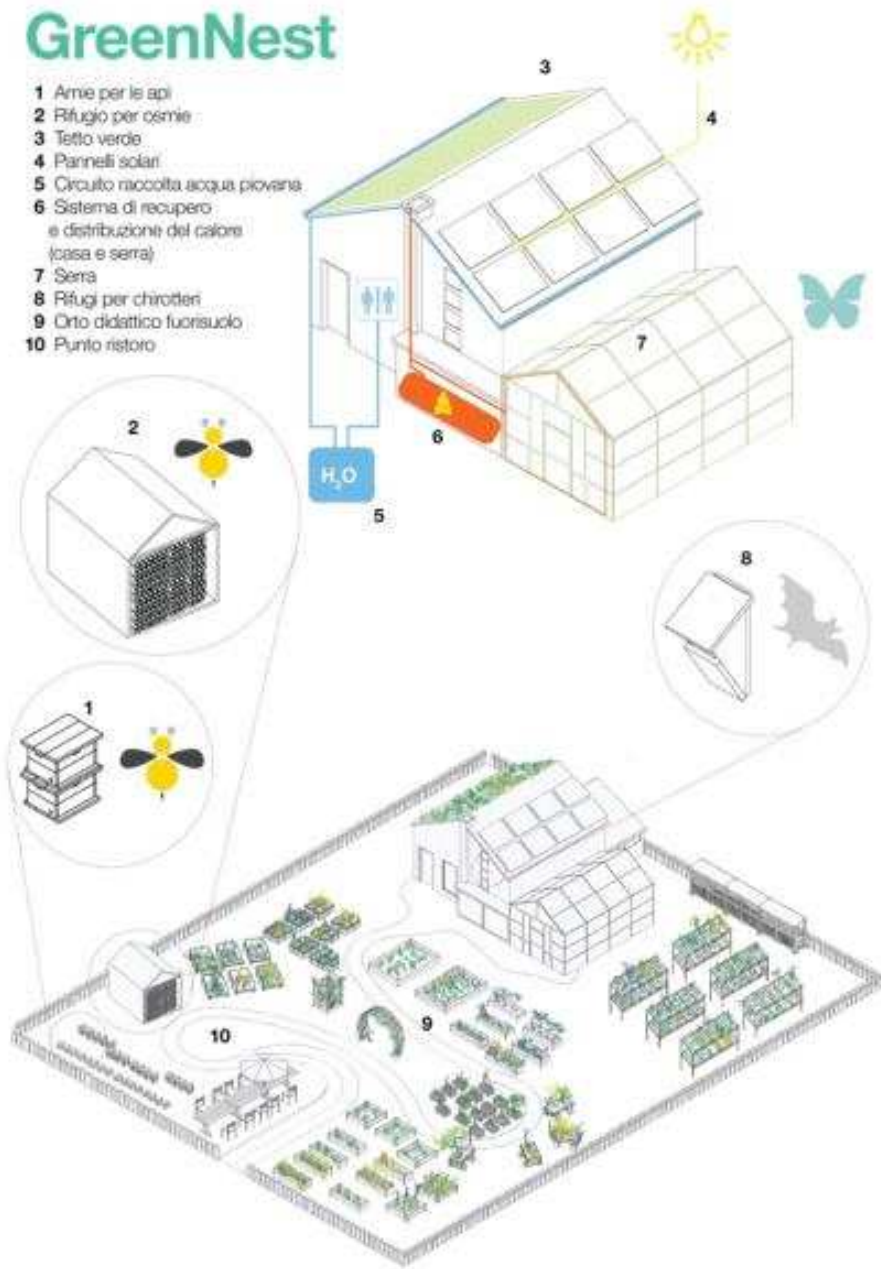




# ... and creating small biodiversity incubators (GreenNests) in urban marginal areas...

## GreenNest

- 1 Arnie per le api
- 2 Rifugio per coccinelle
- 3 Tetto verde
- 4 Pannelli solari
- 5 Circuito raccolta acqua piovana
- 6 Sistema di recupero e distribuzione del calore (casa e serra)
- 7 Serra
- 8 Rifugi per chirotteri
- 9 Orto didattico fuorisuolo
- 10 Punto ristoro





# Thank you for your kind attention!



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

Giorgio Prosdocimi Gianquinto

Dip. Scienze Agrarie

*[giorgio.gianquinto@unibo.it](mailto:giorgio.gianquinto@unibo.it)*

*<http://www.unibo.it>*

*<http://www.dipsa.unibo.it/>*