PROJECT DESCRIPTION

LIFE BIOREPEM is a project aimed at reducing toxic substances spread in the urban environment with pest control.

Biocides and pesticides negatively affect human health and natural ecosystems. A different approach is needed to combat pest species such as rats and mosquitoes!

LIFE BIOREPEM has developed a model that integrates electromechanical and ecological capture systems with a web platform for the geo-localized management of pests and the collection of environmental data.

LIFE BIOREPEM model will be disseminated to other municipalities and the web platform made available for free for more efficient planning and monitoring of pests control. The project also introduces new environmental criteria in the procurement procedures for pest control services.

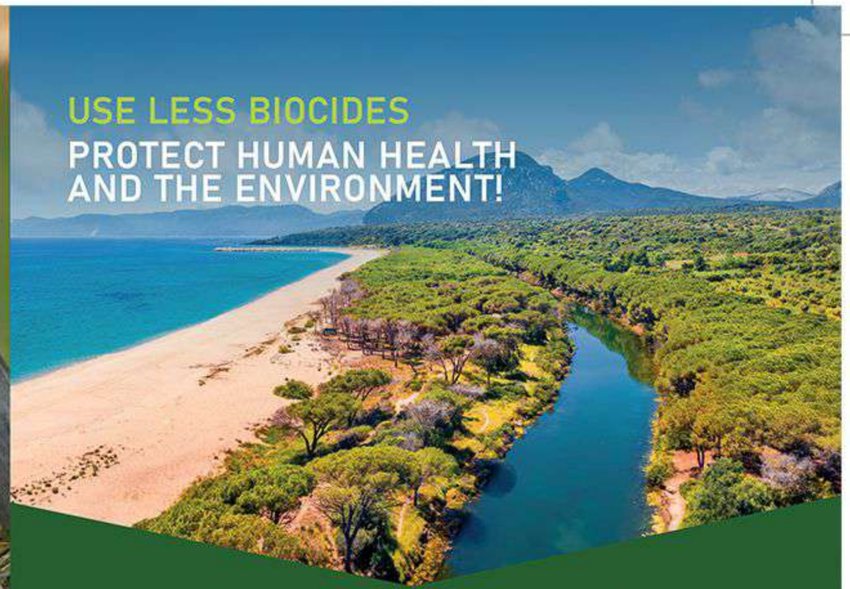
LIFE BIOREPEM model optimizes the pest control services carried out by private companies on behalf of municipal authorities, reducing unwanted impacts on domestic and wild animals, and improving the quality of the urban environment for the benefit of all citizens.

106
ECOTRAPS

-50%
RODENTICIDES

-20%
INSECTICIDES

CITTÀ DI FIUMICINO · CITTÀ DI FRANCAVILLA AL MARE · ISPRA · ecosistemi · A.GE.I. · Natur-Lab



Let's make our cities more sustainable!
We can protect the environment by fighting pest species with innovative mechanical and digital systems that do not require toxic substances

Pilot municipalities: Fiumicino (RM) and Francavilla al Mare (CH)

BIOREPEM

PROJECT FINANCED FROM THE EUROPEAN UNION

LIFE 19 ENV/IT/000358
BIOCIDE REDUCTION IN PEST MANAGEMENT

SOME THINGS YOU MAY NOT KNOW ABOUT BIOCIDES

Substances used for the production of insecticides and rodenticides present a particularly high-risk profile for human health and the environment.

These substances are very effective at minimal concentrations. They can cause undesirable effects by ingestion and by simple contact. They act as endocrine disruptors and are carcinogenic, toxic to reproduction and vital organs such as the heart, kidneys, liver, lungs and nervous system.

Anti-vitamin K anticoagulants used against mice and rats must be handled with gloves and placed inside special dispensers to prevent access to the poison to other animals or children. In case of prolonged exposure, they cause bleeding and can be fatal if ingested or inhaled.

Pyrethroids and organophosphorus are insecticides used to kill adult mosquitoes. If they reach aquatic environments, they are toxic to insect larvae, amphibians, fish and other invertebrates, potentially compromising the entire food chain.

In the terrestrial environment, these molecules are very toxic to beneficial insects such as bees or other pollinators; this, in turn, can also affect the reproduction of valuable agri-food plants and biodiversity.

INTEGRATED SYSTEM FOR PEST MANAGEMENT

It consists of a network of multi-capture electromechanical traps connected and / or managed through a web platform that can also collect data (temperatures and other information) useful for planning and optimizing disinfestation services.
Rodent catches are displayed in heat maps, thus enabling early detection of infestation outbreaks. Pest control is performed with an Integrated Pest Management (IPM) approach, which combines fight with prevention and active monitoring. A Municipal pest management plan describes the system and the activities to be carried out.

RODENT CAPTURE SYSTEM

It consists of a network of electromechanical traps communicating remotely with the platform. The traps have a small ladder leading to a trap door that opens into a container filled with preservative liquid. To attract rodents, the ladder is sprinkled with seeds and other natural attractants. Attracted rodents scramble to eat until they fall into the tank, where they die within seconds by drowning. This simple system allows you to capture and store up to 80 animals without releasing odours. It also spares rodents the slow and painful agony they face when ingesting rodenticides.

MOSQUITO CATCH SYSTEM

It combines:

- preventive actions (control and reduction of water stagnation);
- treatments for the elimination of larvae (ovitraps or non-toxic treatments in manholes);
- capture of adult mosquitoes with mechanical suction traps. The traps emit a subtle stream of CO_2, similar to human breath, which attracts mosquitoes. Once they reach the trap, they are sucked into a removable container where they die from dehydration.

WHAT'S IN IT FOR THE MUNICIPALITIES

The LIFE BIOREPEM web platform for the management of pest control services will be available free of charge to all interested municipalities, together with the user manual and a protocol for the collection of relevant data. All documents produced by the project (technical specifications and tenders for pest control services, management plans, manuals, communication materials, etc.) will be freely downloadable from the website **www.lifebiorepem.it**
Buying (or renting) the traps is an investment that each municipality should evaluate based on the availability of financing or funding programs. The objective of LIFE BIOREPEM is to demonstrate that, by adopting the new system and the developed approach, it will be possible to reduce the use of biocides and their impact on the environment. In the short to medium term, it may even be possible to reduce the overall costs of municipal pest control.
For more information, you can choose to attend one of the project seminars.

WHAT'S IN IT FOR THE PEST CONTROL COMPANIES

European and national environmental policies aim to reduce or replace toxic substances in all sectors. For this reason, the use of biocides/pesticides is subject to restrictions. So far, pest control activities have benefited from derogations due to the lack of effective alternatives to these products on the market. Today these alternatives exist!

LIFE BIOREPEM offers the interested operators of the pest control sector a free opportunity to update, qualify and align themselves with new environmental policies. Anticipate market developments and find an answer to the changing needs of municipalities by following one of the BIOREPEM courses!

For information about LIFE BIOREPEM training activities: training@lifebiorepem.it