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INTEGRATED ACTION PLAN

Eurometropolis of Strasbourg

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URBACT
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One Health 4 Cities

Eurometropolis of Strasbourg (2025)

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About this document

The URBACT Integrated Action Plan (IAP) is a document developed at the municipal level that defines the actions to be implemented in the city to **address the specific urban policy challenge of the One Health 4 Cities network**. The action plan reflects the lessons learned by local actors, transnational partners and actions
tested at the local level.

Action plans are therefore both **a focal point and an end goal** of the action planning process that cities undertake within their URBACT Action Planning Network (APN). They help to ensure that discussions at
local level (within the URBACT Local Group) and transnational exchanges (between network partners) focus in a practical way on planning a coherent set of actions aimed at addressing the local policy challenge in each participating city, incorporating an integrated and participatory approach.

The action plans are forward-looking: they define the actions that cities and their local partners will implement beyond the URBACT network's life cycle. This is why each action plan not only defines what the city intends to do on a specific topic, but also emphasises implementation, for example by identifying funding opportunities, governance structures and timetables for implementing and monitoring actions.

About the network

The **One Health 4 Cities** network**,** an action planning network of the URBACT IV programme, highlights how to implement the One Health approach in urban public policies, strategies and projects. Composed of cities
With varying levels of experience on the subject and different local contexts, the network promotes a collaborative environment where the nine partners come together to learn and share their experiences: Benissa (ES), Elefsina (GR), Kuopio (FI), Lahti (FI), Loulé (PT), Lyon (FR), Munich (DE), Eurométropole de Strasbourg (FR) and Suceava (RO). The network aims to develop tools that enable decision-makers and operational teams to increase the positive impact of urban projects on the well-being and health of people, animals and the environment. The main partner in the network is the city of Lyon.

SUMMARY

CONTEXT AND VISION

Long focused on issues of access to healthcare, health policy in the Eurometropolis of Strasbourg has since expanded to include environmental health, which addresses environmental factors that impact human health. However, environmental health is closely linked to animal health – through food or the risk of transmission of emerging diseases, for example – as well as to the health of the environment through the quality of the environment and pollution. Given this interconnection between living organisms and ecosystems, exacerbated by climate change, it is becoming urgent to consider a holistic and integrated vision of health: One Health. Through a programme of dedicated actions, but also by adjusting our approach to sectoral policies such as greening, mobility, building design, agriculture, the water cycle, etc., **it is up to the community to implement a comprehensive "One Health" policy.** This policy takes into account these complex links and aims to promote a multidisciplinary and intersectoral approach in order to better care for inhabitants, nature and living organisms.

1.1 Context and challenges for the Eurometropolis of Strasbourg

The Eurométropole de Strasbourg is a region in north-eastern France, located directly on the German border along the Rhine. The metropolitan area has a population of 517,000 and comprises 33 municipalities of varying sizes and types, organised around the city centre of Strasbourg. The territory is relatively contrasting between Strasbourg and the surrounding municipalities, with different contexts and priorities. The organisation and powers of the metropolis encourage cooperation between municipalities to work on cross-cutting issues such as transport, the environment, land use and urban planning. The Eurometropolis of Strasbourg is governed by a metropolitan council composed of elected representatives from the member municipalities.

- **Challenges facing the area**

The Eurometropolis of Strasbourg is an area characterised by significant social and territorial inequalities. Among the 22 French metropolitan areas, the Eurometropolis of

Strasbourg is the area with the highest poverty rate at 60% of median disposable income: in 2021, 21% of the population lives below the poverty line.

In the Eurometropolis of Strasbourg, part of the population is in poor health. The area is characterised by an increased prevalence of hypertension, obesity and diabetes (5% of the population) as well as high mortality from cancer, cardiovascular disease, stroke and respiratory disease. Although it cannot be separated from lifestyle and behaviour, exposure to chemicals also contributes to this in a historically industrial region where intensive agriculture plays an important role.

There is also a cumulative exposure to environmental risk factors
environmental factors that may have an impact on residents' health:

- Exposure of almost the entire population to air pollution above the thresholds set by the WHO, in particular to fine particles and nitrogen dioxide linked to road traffic and the location of the urban centre in the Rhine valley.
- 3/5^{e} of the population exceeding WHO thresholds for exposure to road traffic noise (53 dB),
- Increased risk of infection due to the rapid spread of the tiger mosquito (all municipalities affected since 2023) and the marked presence of ticks infected with Lyme disease.
- Spread of new invasive alien species, such as Tapinoma Magnum ants, which affect vegetable production in family and municipal gardens.
- Detection of micropollutants and pesticide metabolites
  pesticide metabolites in water.
- Marked existence of the heat island phenomenon,
- Increase in allergic reactions, which now affect 30% of the population.

- **Political context**

The Eurometropolis of Strasbourg is pursuing a political project based on three pillars: ecological transition, social justice and participatory democracy. Many public policies incorporate cross-cutting issues

climate change mitigation and adaptation (mobility, food,
urban planning, nature in the city, energy, etc.).

The city is also particularly committed to protecting the health of its residents through an active and innovative public health and environmental prevention policy that has been developed over many years. Strengthening the role of nature through the greening of school playgrounds, the preservation of biodiversity and tree planting, the renaturation of waterways and urban agriculture also has a significant benefit on the physical and mental health of all residents.

In terms of planning, the **2030 Climate Plan** brings together health considerations and various sectoral issues, making it possible to anticipate and model the health impact of regional climate policy. The Local Intercommunal Urban Development Plan (PLUi) allows these developments to be incorporated into
the way in which the urban centre is restored and developed. One example is
the adoption in 2021 of a development and programming guideline (OAP)
"Air-Climate-Energy"[1], integrating strategic air quality maps into urban planning regulations, and more recently the introduction of strategic objectives contributing to the fight against tiger mosquitoes and **pollen** allergies2.

1 Amendment No. 3 to the PLUi (2021).

2 Amendment No. 4 to the PLUi (2024).

1.2 Commitment of the Eurométropole in in of health and the environment

The Eurometropolis of Strasbourg has been committed for several years to promoting an environment conducive to the quality of life and well-being of its inhabitants through **the "Healthy and Sustainable Living Environment" roadmap** adopted in 2018. The aim is to help reduce social and territorial health inequalities, increase the consideration of health in all public policies, support the capacity for action of all municipalities and encourage the adoption of "good practices" by the public in favour of better health.

This ambition was realised in 2019 through a dedicated environmental health section introduced into the Eurometropolis' Local Health Contract (CLS) to accompany and financially support local initiatives. Between 2019 and 2021, a large network of stakeholders – associations, researchers, public interest organisations, etc. – has been mobilised to implement some forty projects involving studies, diagnostics and public awareness campaigns on environmental health: air pollution and indoor air quality, noise, urban planning, housing quality, bedbugs and rodents, tiger mosquitoes, mobility, pollen, endocrine disruptors and, more generally, environmental health education.

In 2021, a consultation process involving local stakeholders and partners was launched to renew the scheme, leading to the signing of a third-generation CLS in July 2023 for a period of four years. **Environmental health plays an important role in this scheme and, as such, is a public policy priority** for the Eurométropole de Strasbourg and its partners for the coming years.

More specifically, the aim is to work towards an integrated approach to environmental health by focusing on several key objectives **[Fig. 1]**.

Within this framework, the Eurométropole de Strasbourg is implementing this strategy by developing several initiatives:

- **Creation of a range of environmental health projects**, via an annual call for projects aimed at local authorities and residents: indoor air quality, endocrine disruptors, pollen, bedbugs, environmental education, nature and health, outdoor schooling, combating urban overheating, etc.

Figure 1: The environmental health priorities of CLS III (2023–2027)

- **Dynamics for improving air quality:** deployment of a **Low Emission Zone** and the mobility revolution in support of a "health" advocacy campaign, the Pollin'Air system for the prevention of pollen allergy , installation of sensors of CO2 in schools , support for households in managing indoor air quality,
- **Combating endocrine disruptors:** implementation of a **green prescription** for pregnant women in Strasbourg, support for the organisation of a **European symposium on "Yilles and territories free of endocrine disruptors"** with the Environment and Health Network, organisation of workshops and conferences for the general public and professionals in the municipalities,
- **Fight against the tiger mosquito:** implementation of an ambitious action plan with an integrated control strategy in certain municipalities, mobilisation of a network of ambassadors and deployment of awareness-raising actions on best practices,
- **Combating noise pollution:** elimination of "noise black spots" in support of **the Environmental Noise Prevention Plan (PPBE)**, search for "air and noise" synergies in insulation and energy renovation work.
- **Health-friendly urban planning (UFS):** deployment of a dedicated roadmap, organisation of several training sessions for urban planning stakeholders through a learning journey, consideration of health at different stages of pilot development projects, dedicated commitments in **the "Think, aménagement et construire en transition écologique" (Think, develop and build in ecological transition) initiative** and a working group working group on the presence of biocides in façade coatings.

For many years, the Eurometropolis of Strasbourg has also been committed to the protection and development of biodiversity:

- **Zero pesticides and ecological management:** Since 2008, the EMS has stopped using pesticides in public spaces in favour of a more ecological and differentiated approach to managing green spaces
- **Watercourse networks and renaturation:** Between 2012 and 2014, the EMS identified its **Green and Blue Network** (TVB), which was incorporated into the PLUi in 2016.

This plan includes graphic and written regulations to increase agricultural and natural areas and protect riparian forests. Work has been carried out to renature watercourses and create ponds in order to deploy a blue network. Since 2018, the EMS has also been working

on a **black screen** to reduce the impact of lighting on wildlife and flora.

- **Urban development and greening:** Numerous initiatives are being carried out, such as assessments prior to development projects to better integrate biodiversity, the implementation of **the Canopée plan** to expand and renew Strasbourg's tree heritage

  Strasbourg, and the "**Strasbourg ça pousse !**" (Strasbourg is growing!) initiative, which encourages individuals to garden in public spaces, the partnership charter "**Tous unis pour plus de biodiversité" (All united for greater biodiversity)**, which commits businesses, associations and public bodies to more environmentally friendly management of their green spaces, with over 100 signatories.
- **Agricultural environment:** Since 2010, the EMS has been working with the Chamber of Agriculture to promote environmentally friendly agricultural practices. Examples include rural leases with environmental clauses (BRCE) and the development of organic farming.
- **Biodiversity Atlas:** This initiative aims to improve ecological knowledge of the region, integrate this knowledge into public policy, mobilise all local stakeholders and promote participatory science.
- **Research:** EMS collaborates with academia, notably through the **Urban Environment Workshop Zone** (ZAEU). From 2019 to 2023, a CIFRE thesis studied the impact of greening and

  urban forms on the reduction of heat islands. A new thesis, begun in 2023, explores the impact of demineralisation on soils (Perméasol project).

Finally, since 2021, Strasbourg has been committed to animal welfare through its **"Animaux en ville" (Animals in the City**) strategy: creation of biodiversity refuges, deployment of contraceptive pigeon lofts, free cat programme, raising awareness about feeding wildlife, advice on installing beehives in the area, etc.

In summary, there are many initiatives in the area to promote the health of residents and animals and to preserve the environment. It appears that

that these initiatives are often independent and do not address health from a holistic, interconnected perspective that encompasses all living beings. This is the challenge and ambition of the Eurometropolis of Strasbourg within the URBACT project "One Health 4 Cities": **to build a partnership dynamic and a strategic framework that, based on an operational and experimental action plan, will enable the integration of the "One Health" approach into its projects and public policies.**

1.3 The integration of the "One Health" approach " seule santé" : challenges and opportunities

The last few decades have seen a significant increase in emerging infectious diseases, many of which originate in animals. The Covid-19 pandemic has highlighted the urgent need to rethink our health systems and strengthen collaboration between different stakeholders in order to prevent and respond to future health crises. It has reminded us that the effectiveness of health actions and policies depends on taking into account the interconnections between human, animal and ecosystem health. In light of this, it seems essential to adopt a comprehensive and integrated approach to health.

- **Bringing coherence through a holistic vision of health**

Proposing the "One Health" approach as a guiding principle at the local level provides an opportunity to bring coherence and a common narrative to various public policies (ecological transition, public health, social cohesion, land use planning, nature in cities, biodiversity, etc.). There is indeed every reason to join forces towards a shared ambition to protect life and all forms of health. The challenge is to understand the complex and reciprocal links that unite all living beings and to find a balance that moves away from a solely human-centred approach. In an urban context such as that of the Eurometropolis, it is also essential to improve humans' relationship with nature – not only to benefit from it, but also to protect it.

- **Mobilising stakeholders on a large scale: between challenge and opportunity**

To address these complex challenges, it is essential to mobilise the skills of various actors: doctors, veterinarians, ecologists, sociologists, etc. The "One Health" approach is generally unknown or poorly understood in government departments and among partners. In reality, each actor has their own interpretation based on their culture, missions and expertise. Locally, integrating this approach therefore makes it possible to engage a wide range of stakeholders in sharing a common vision.

Mobilisation within the URBACT Local Group **[Fig. 2]** contributes to information sharing and acculturation to "One Health" in order to increase political and technical commitment.

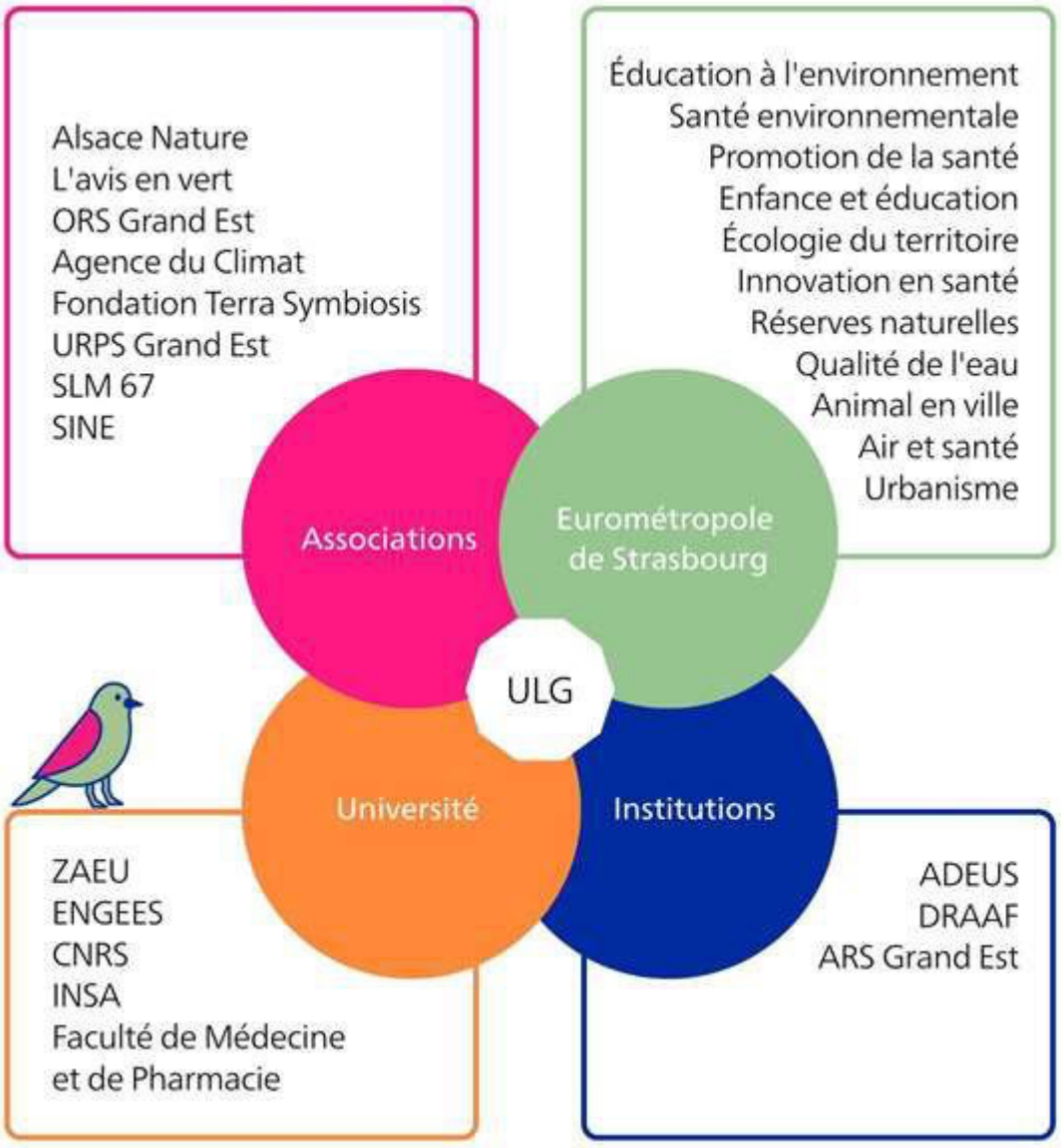


Figure 2: Composition of the URBACT Local Group (ULG) of the Eurometropolis of Strasbourg

It also aims to strengthen mutual understanding among stakeholders and create greater cross-disciplinary cooperation. Faced with a "silo" approach, this paradigm shift represents a challenge that the local group is attempting to address.

The ecosystem of stakeholders in the Eurometropolis of Strasbourg provides an opportunity to implement a "One Health" approach in its various components:

- Interactions with the research community: partnership with ZAEU, a transdisciplinary research initiative dedicated to studying and understanding environmental issues in the region; project to create a Metropolitan Institute for Public Health and Social Innovation led by the University of Strasbourg.
- A particularly dynamic partnership ecosystem focused on environmental health issues: mobilisation of associations, growing interest from institutional players, detailed expertise from public interest organisations,
- Research into innovation to reach the general public through awareness-raising initiatives and citizen participation tools.

- **Existing and future resources**

From a financial perspective, actions promoting residents' health and preserving their environment are championed and supported by local elected officials. Within the local authority, several full-time staff members are dedicated to these issues. This provides a relatively strong capacity for action and a favourable framework for developing a comprehensive "One Health" strategy across the region.

However, in a context of budgetary constraints, it remains necessary to capitalise on resources, integrate into existing initiatives and identify additional support in order to achieve the desired ambitions.

In summary, an analysis of the implementation of a "One Health" approach in the Eurometropolis of Strasbourg:

Strengths	Weaknesses
Very dynamic political support, reflecting a commitment to the issue. Environmental health is already one of the municipality's priority projects. Dedicated human and financial resources financial resources.	Lack of public awareness of environmental health issues. Need for support on communication tools and citizen participation. Insufficiently exploited cross-cutting links between the health, environment and animal sectors. No veterinary school in Strasbourg: less expertise in this field. Current vision very focused Current on people.
Opportunities	**Threats**
Strengthening of national and European policies on the subject. Marked interest in the "One Health" approach among all partners. A community of stakeholders who are committed and invested in the subject. Close ties with the University of Strasbourg and synergies with its ambitions.	Risk of stakeholder disengagement, particularly due to lack of availability. Tight budgetary constraints. Municipal elections in 2026: uncertainty about the future priorities of the next municipal council.

1.4 What vision for "One Health" in the Eurometropolis of ?

How can we protect all aspects of health in the metropolitan area?

How can we forge closer links between human, animal and environmental health? How can we find a new balance where human health is not the sole focus of our attention but is seen as the result of interconnections, forcing us to rethink our relationship with living things? How can we ensure social and environmental justice, particularly so that the most vulnerable can enjoy a healthy environment and high-quality food? In short, how can we build a future where everyone's health is a priority?

By changing its paradigm and adopting a more global vision, the Eurometropolis aims to ensure that, by 2030, public projects and policies systematically incorporate the "One Health" approach into an integrated approach to risks and benefits. Citizens will be able to engage with these issues, which will be made visible through awareness-raising initiatives, and will commit to individual actions that complement public policies. Research and innovation will enable Strasbourg to position itself as a pioneering local authority in the field of global health.

Within the framework of the priorities for a territory conducive to all forms of health **[Fig. 3]**, a number of cross-cutting questions arise:

What role should nature play in cities, in order to maintain a balance that is beneficial to the health of all living beings? How can we promote green cities as part of a "One Health" vision?

Promoting nature in cities and providing residents with natural spaces that also serve as biodiversity reserves is a priority. We want to build on existing initiatives and consider them from a "One Health" perspective, particularly in terms of benefits and risks: the benefits of nature for health (mental health, physical activity, etc.), limiting allergenic risks, regulating invasive species that pose a risk to health and biodiversity (tiger mosquitoes, ticks, invasive ants, , etc.), adoption of "One Health" knowledge by the public and good practices to respond to it.

How to protect ecosystems and health by reducing exposure to chemicals and pollutants and pollutants?

Preventing exposure to chemicals and endocrine disruptors is a priority for the Eurometropolis of Strasbourg. The aim is to protect the environment (water, air, soil) from contamination by substances linked to human activities, such as agriculture, but also to protect the health of populations, particularly those who are most vulnerable in terms of both their living environment and their activities.

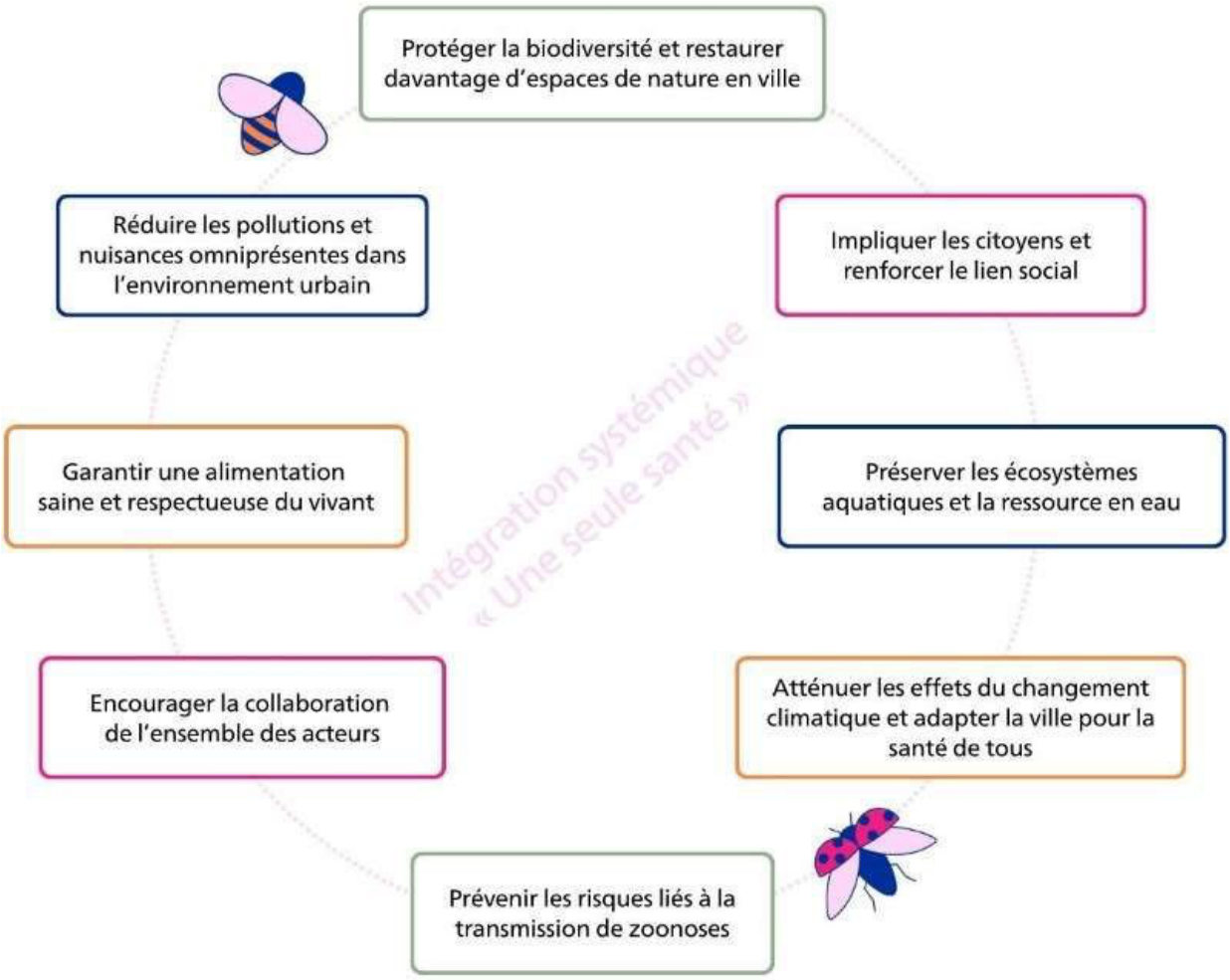


Figure 3: The priorities of the Eurométropole de Strasbourg for a territory that promotes all aspects of health

FROM VISION TO TO ACTION

The Eurométropole de Strasbourg's vision for caring for its residents, the environment and living things is holistic and ambitious. The aim is to gradually implement it over the coming years. **The adoption of a**

"One Health" strategy by the Eurometropolis Council on 7 February 2025

is a first step towards creating a region that promotes all aspects of health.

2.1 The Eurometropolis of Strasbourg's "One Health" strategy

Integrating the "One Health" approach into local public policies

Many metropolitan sectoral policies are already in place and have a positive impact on living organisms: urban planning and land use policies, environmental policy, agricultural and food policy, and the Climate Plan. However, their impact on living organisms is too often undervalued and still operates in a compartmentalised and siloed manner. The aim is to promote coordination between them, supplement them where necessary, and highlight their impact on living organisms using the "One Health" approach.

- **Promoting a "One Health" territory**

The Eurometropolis is already heavily involved in promoting health-friendly urban planning and making the metropolitan area a "One Health" territory. This commitment is enshrined in the **Pact: Thinking, planning and building in ecological transition** for urban planning in transition.

To go further, the aim is to:

- Introduce the "One Health" approach "Une seule santé" into the policy on urban renewal,
- Systematise the "One Health" approach in all development and rehabilitation projects,
- Take into account the "One Health" approach in the metropolitan territory project and planning documents such as the PLUi (local urban planning plan),
- Protect biodiversity and restore more natural spaces in the city

- **Take action on environmental factors: improve air quality and reducing noise pollution**

Improving air quality is a key focus of metropolitan policy, both in terms of outdoor air – through the roll-out of the Low Emission Zone, the modal shift towards carbon-free transport and the expansion of district heating networks – and indoor air – through renovation grants and support for households to improve the air quality in their homes. Synergy between air and noise initiatives is also being sought in the fight against noise pollution, through the elimination of noise hotspots in support of the Environmental Noise Prevention Plan (PPBE).

To go further, the aim is to:

- Contribute to a better scientific understanding of the effects on all health (human, animal, environmental) of outdoor pollutants that have a high impact on health (ozone) and are not regulated (ultrafine particles).
- Continue efforts to improve air quality in the region.
- Raise awareness among urban planning stakeholders and residents residents about indoor air quality and noise exposure,
- Promote the calming of the area's soundscape and the emergence of high-quality sound environments (nature sounds) less burdened by anthropogenic noise,
- Study the role of green spaces in improving the soundscape and outdoor air quality.

- **Promote healthy and sustainable food and take into account the benefits of nature for human health.**

The links between food and health are well established, and the Eurometropolis of Strasbourg has launched an ambitious policy to combat endocrine disruptors, improve food quality and support organic farming.

To take this further, the aim is to:

- Supporting municipalities that wish to implement green prescription schemes and providing more information on the impact of endocrine disruptors to residents and professionals.

- Promote sustainable agriculture to reduce exposure to pesticides and improve the nutritional quality of food, while also paying attention to animal husbandry conditions that respect the three types of health.
- Supporting and raising awareness among farmers about the health impact of current agricultural practices and promoting greater protection of water catchment areas.
- Emphasise the benefits of nature for human health by strengthening contact with nature, in particular by supporting schools and local authorities that wish to develop nature nurseries
  and outdoor classrooms (by maximising outdoor activities
  outdoors)

- **Prevent risks related to the transmission of zoonoses and emerging diseases**
  emerging diseases

The COVID-19 pandemic has highlighted the deep links between animal and human health and the risks associated with excessive urbanisation encroaching on natural habitats, amplified by the effects of global warming. Recent cases of avian flu transmission to humans and the pandemic risks posed by Mpox call for a consolidated effort to combat the transmission of zoonoses and emerging diseases. The City and Eurometropolis of Strasbourg are already engaged in sectoral policies in this area, with measures to combat tiger mosquitoes and bedbugs, limit rodent overpopulation and tackle tick-borne diseases.

To go further, the following measures are needed:

- Protect biodiversity by establishing protected areas, restoring natural habitats and combating deforestation.
- Make better use of natural predators,
- Strengthen the fight against Lyme disease and other tick-borne diseases,
- Work with farmers and veterinarians to preserve animal health
  ,
- Inform residents about zoonotic risks.

Inform, raise awareness, train

In order to support the creation of a "One Health" culture among stakeholders, information, awareness-raising and appropriate training programmes are needed. Initiatives already exist, such as training courses on healthy urban planning and combating the tiger mosquito, and the introduction of an environmental health module into the initial training of health professionals by the Faculty of Medicine of Strasbourg. In addition, more and more events are being organised in our region, facilitating debate between professionals and institutions, but also with the general public.

To go further, we need to:

- Strengthen, systematise and extend training to all relevant professionals (service agents, healthcare professionals, architects, etc.) by introducing interdisciplinary sessions.
- Develop online tools and resources (training modules, webinars) to make information more accessible and understandable.
- Support and develop events for professionals and the general public (workshops, conferences, festivals).
- Establish local partnerships with associations, schools, and universities to organise awareness-raising initiatives such as participatory science projects.
- Establish transdisciplinary networks for the exchange of best practices encouraging the creation of collaborative projects.

Support observation and research

The evaluation of public policies is essential to any innovative approach. We therefore have a responsibility to support and promote observation and research on the "One Health" approach. A particularly dynamic partnership network is already mobilised within the framework of the Local Health Contract III to evaluate the impact of health measures on the general public and to promote innovation in both the public and private sectors (e.g. Ne×tMed). There are strong interactions with the research community, notably in support of the ZAEU and the University of Strasbourg.

To go further, the aim is to:

- Support the creation of the Metropolitan Institute for Public Health and Social Innovation led by the University of Strasbourg as part of the agreement with the Eurometropolis.
- Support and invest in the upcoming "One Health" programme programme of the ZAEU,
- Assess the health impact of climate measures included in the Climate Plan

Establish "One Health" governance

The ecosystem of local stakeholders provides an opportunity to implement the "One Health" approach. Within the framework of local health contracts, a particularly dynamic partnership network is already mobilised around public health and environmental issues, thanks to the strong involvement of associations, growing interest from institutional stakeholders and the detailed expertise of public interest organisations.

To take this further, as cooperation and interdisciplinary collaboration are key to success, it is proposed that a strategic steering committee be set up, bringing together representatives of stakeholders in the region. To address these complex challenges, it is essential to mobilise the skills of professionals and institutional actors from different backgrounds – service agents, doctors, veterinarians, ecologists, sociologists, etc. – and to involve representatives of civil society.

The Eurometropolis therefore proposes to set up a dedicated governance structure:

- **A strategic steering committee** bringing together in the region, responsible for validating the guidelines proposed by the operational committee according to various criteria, including relevance, feasibility and acceptability
- **An operational committee** responsible for proposing an action plan and its implementation procedures. It will include representatives of stakeholders in the region, organised into four colleges:
    - Local authority officials representing all relevant departments: health promotion, urban planning, childhood and education, environmental risk management, etc.

- A college of academics, teacher-researchers, engineering schools, ZAEU, etc.
- A college of public institutions and organisations, including, for example, the Regional Health Agency, the DRAAF, the Water Agency, ADEME, etc.
- A group of civil society and professional associations, including SINE, Alsace Nature, the Regional Union of Health Professionals, the Regional Health Observatory, the Bas-Rhin Mosquito Control Union, etc.

2.2 From strategy to experimentation: the challenge of the action plan

Despite the Eurométropole de Strasbourg's strong ambition to develop its strategy "One Health" implementation remains a considerable challenge, as translating this theoretical approach into concrete actions on the ground can be complex. That is why the local authority seized the opportunity offered by URBACT to move from theory to practice, deciding to develop **an initial operational action plan to trial innovative and replicable actions based on collaborative governance**.

The choice was therefore made to focus on a **test area**, smaller than the entire Eurometropolis, in order to concentrate efforts and anchor actions in a local reality. This also ensures better ownership of the projects, taking into account the specific characteristics of the area while facilitating the direct involvement of citizens and local actors, particularly associations. This area, characterised by its diversity of spaces, thus becomes the ideal setting for testing initiatives that can be adapted and extended to other parts of the conurbation, with the aim of developing models and methodologies that can be rolled out more widely.

An action plan in the form of an experiment: why?

*Moving **from theory to practice:** The One Health approach can easily become abstract if it is not translated into concrete actions. Having an operational action plan makes it possible to translate this vision into tangible interventions and actions, and to test the feasibility of different initiatives in a real-world setting.*

***Responding to local and specific challenges:** The approach is applied differently depending on the geographical, socio-economic and environmental contexts. An action plan targeted at a specific territory makes it possible to adapt the strategy to local realities, identify specific needs and design appropriate solutions. An operational plan makes it possible to adjust actions and priorities to the particularities of the field.*

***Engaging local stakeholders:** An operational action plan is a lever for better structuring collaboration; it facilitates the involvement of citizens and local actors, thereby strengthening the community's sense of ownership.*

Testing and adjusting solutions in the field: *As this is a relatively new issue, it is crucial to be able to test the effectiveness of solutions in pilot areas before rolling them out on a large scale. The action plan therefore provides a framework for experimenting, evaluating the impact of projects and adjusting them based on the results obtained.*

Creating replicable models: *The action plan also makes it possible to devise replicable solutions and create methods that can then serve as models.*

2.3 Objectives of the action plan

General objective: To implement the Eurometropolis of Strasbourg's "One Health" strategy by making it operational and promoting the collaborative involvement of local stakeholders and citizens.

Strategic objective: To test, in a pilot area, concrete actions illustrating the "One Health" approach by linking human, animal and environmental health issues, in order to validate operational and replicable models for the Eurometropolis of Strasbourg.

Operational objectives:

- **Establish a method for raising awareness and involving the public** in order to develop a common culture around the "One Health" approach in the pilot neighbourhoods, actively involving citizens and community stakeholders.
- **Strengthen scientific research** to better understand the health interactions between humans, animals and the natural environment, in order to better understand the challenges inherent to "One Health"
- **Implement concrete projects in the pilot area,** responding to the determinants of the "One Health" approach and leading to a living environment that is favourable to all health issues

2.4 Presentation of the test territory

The test territory chosen for the integrated action plan experiment [Fig. 4] consists of a group of different neighbourhoods located south of the Eurometropolis of Strasbourg:

- The residential neighbourhoods of Neuhof, Meinau and Stockfeld face numerous health, social and environmental challenges. This densely populated, contrasting and vulnerable area is also rich in local dynamics, ecological potential and high expectations in terms of quality of life.
- The neighbouring Illkirch Innovation Park is a technology hub hosting technological and academic activities and industries of the future.
- The Strasbourg-Neuhof/Illkirch-Graffenstaden forest covers 945 hectares in the south of the area and forms a genuine green belt protected as a nature reserve.
- Finally, the Rhin-Tortu river forms the physical link between the different areas.

The Rhin Tortu as a common thread

To anchor this approach in reality, **the local URBACT group chose to structure its actions around the Rhine-Tortu**, a winding urban waterway that runs through the area. Once seen as a boundary between neighbourhoods, it is now seen as the driving force behind an **ecological and social reconnection** project, a place of experimentation to restore nature's place in the city, rebuild links between neighbourhoods and re-establish broken continuities between humans and non-humans. The Rhin-Tortu concentrates multiple interconnected issues: water and soil quality, fragmentation of wildlife habitats, presence of sentinel species, leisure activities, effects of pollution, and residents' perception of living organisms. It thus embodies a testing ground for thinking about the interactions between humans, animals and ecosystems.

The action plans developed collectively within this framework reflect this ambition. They aim to restore ecological continuity, improve quality of life, prevent health risks, create spaces for social interaction and well-being, but also to question our practices, behaviours and ways of living in the region. Each action is designed as an integrated response to

interrelated issues, where environmental, social and public health challenges coexist.

For the "One Health" approach to be effective, it must be understood, embodied and lived by local stakeholders. With this in mind, a key component of the project involves engaging local residents and raising their awareness, with the aim of reconnecting them with their environment, fostering a broader culture of health and nurturing a renewed relationship with living things. It will use a variety of formats – educational, artistic, participatory, scientific – and will help to embed the "One Health" approach in the customs, narratives and representations of the area. Thus, through the Rhin-Tortu, a whole way of thinking about and promoting health is being experimented with, co-constructed and rooted in the territory. The ongoing reflection on the creation of an Urban Nature Park (PNU) in the Rhin-Tortu sector will be a powerful lever for benefiting from an innovative method of citizen inclusion.

Figure 4: The pilot area for the action plan

(R. Guillois, for the Eurometropolis of Strasbourg, August 2025)

Y ACTION PLAN

The action plan is organised as follows:

Six action sheets co-developed in line with the operational objectives:

Implement concrete projects that address the determinants of the One Health approach

FA 1: *Develop an ecological and social reconnection zone along the Rhine Tortu*

FA 2: *Integrate the "One Health" approach into the project to plant vegetation in school playgrounds (Oasis) school playgrounds (Oasis playgrounds)*

Strengthen scientific research to better understand the interactions and challenges inherent in "One Health"

FA 3: *Understanding, promoting and developing the sound quality of natural spaces* **FA 4:** *Studying the spread of urban pollution from the Illkirch Innovation Park to the Rhine-Tortu*

FA 5: *Study the impacts and interactions related to feeding animals in urban areas using a "One Health" approach*

Implement an awareness-raising method to develop a common culture around the "One Health" approach

FA 6: *Deploy a "One Health" awareness strategy in the Neuhof-Meinau area and around the Rhin-Tortu Neuhof-Meinau and around the Rhin-Tortu*

Three method sheets resulting from discussions during the development of the action sheets:

FM 1: *How to develop a project that promotes "One Health" ?*

FM 2: *How to establish a "One Health" diagnosis ?*

FM 3: *How to roll out a "One Health" awareness strategy ?*

ACTION SHEET No. 1

Developing an ecological and social reconnection zone along the Tortuous Rhine

Findings and challenges

The Rhin-Tortu area is an ecological corridor of regional importance, forming part of the Eurometropolis' green and blue network since its identification. It plays an essential role in biodiversity, hosting numerous species of fauna and flora, and in the ecological functioning of the territory between the neighbouring Neuhof-Illkirch National Nature Reserve and the city's other natural areas, notably the Green Belt. However, it suffers from certain ecological fragmentation and artificialised banks, limiting ecosystem services while accentuating urban divisions. The Rhin-Tortu river flows through densely populated urban areas and acts as a physical and social barrier between Neuhof and Meinau, two neighbourhoods with contrasting social realities – priority neighbourhoods and suburban areas. At the same time, the area faces public health challenges and growing social needs for nature, leisure and well-being spaces. The project aims to address this triple challenge (environmental, health and social) by restoring the ecological and social functions of the area crossed by the river.

Objectives

General objectives

- Promote the emergence of a multifunctional ecological area around the Rhin-Tortu, which addresses health, ecological and social issues.
- Promote the reconnection of spaces by balancing trophic relationships, facilitate ecological transfers and the appropriation of spaces by inhabitants in accordance with a "One Health" strategy.

Specific objectives

- Improve connectivity between natural and urban areas in the Rhine-Tortu sector, taking into account all living beings; reconnect humans with nature by restoring the Rhine-Tortu to its rightful place and functionality; transform the physical barrier into:
    - A place for meeting and social interaction between neighbourhoods, actively involving residents in the transformation and preservation of their living environment,

- A place of well-being, tranquillity and noise reduction through the creation of accessible natural spaces that promote relaxation and well-being in a peaceful sound environment and areas for contemplation aimed at discovering nature.
- A place for preserving and restoring biodiversity by recreating diverse habitats (aquatic, terrestrial), refuge areas for urban wildlife (birds, insects, amphibians, fish) and restoring autonomous ecological cycles.

- Developing local "One Health" education, focused on empowerment and connection to nature, as well as respect for all forms of health, by involving the public in discovering local biodiversity.

The project could be part of the Urban Nature Park (PNU) initiative announced for this area by the Mayor of Strasbourg in spring 2025.

Brief description

The project consists of proposing developments along the Rhine-Tortu, **in different areas identified according to a naturalness gradient**: areas with a strong focus on use and conviviality will be proposed for development, while other areas will be dedicated to renaturation and tranquillity. The interventions may combine ecological engineering techniques (bank restoration, sediment management, creation of wetlands) and public amenities (pathways, observatories, play areas).

Strong citizen participation must be at the heart of the process in order to co-construct a diagnosis with residents and users, prioritise actions and ensure ownership of the developments. Unifying events will be organised to create a dynamic in the area around "One Health" issues and strengthen social ties.

Action partners

- **Institutions:** City and Eurométropole services, ARS Grand Est, Rhine-Meuse Water Agency, Grand Est Region, DREAL, DDT, OFB, National Education
- **Naturalist associations:** Alsace Nature, LPO, Odonat, environmental education associations: SINE, and user associations: fishermen, pedestrians, gardeners, cyclists, Club Vosgien, etc.
- **CSC** Neuhof and Meinau, Meinau Media **Library**, **neighbourhood associations**, **retirement homes**

- **Schools, secondary schools and sixth form colleges in the area:** Krimmeri, Meinau, Ziegelwasser, Collèges Solignac,
  Lezay-Marnésia, Jean Monnet High School, etc.;
- **Specific local stakeholders:** Racing Club de Strasbourg, Maison de Santé du Neuhof, local businesses (e.g. Suchard/Carambar);
- **Technical and scientific partners:** CNRS, University of Strasbourg, ZAEU, ENGEES, Cerema, ADEUS, Agence du Climat.

Detailed activities

1. Territorial diagnosis and monitoring over time: Gathering information to evaluate the proposed and implemented actions over time; diagnosis developed jointly with experts representing the various themes and issues.

2. Citizen co-construction as a pillar of the project: The approach is based on the constant involvement of residents and users. Surveys and reverse walks will be conducted to co-construct a shared diagnosis and prioritise guidelines. The aim is to make residents active participants in the transformation of their living environment.

3. Implementation of the project based on the proposed guidelines **[Fig. 5],** broken down by sector according to a common theme of "One Health" and a naturalness gradient defining levels of use or preservation; these must be part of a participatory approach at each stage.

4. Facilitating the process and building relationships with users:

- **Mobilising key players in the region** on "One Health" issues: In addition to partners, specific actions will be carried out with:
  - Schools to raise awareness and empower young people through concrete educational projects,
  - Racing Club de Strasbourg to reach a wider audience through events on the theme of health (healthy eating, biodiversity) in the new fan zone at the Meinau stadium,
  - The Health Centre for developing programmes to reconnect with nature and living things,
  - Family gardens to address issues related to biodiversity preservation and alternatives to pesticides, as well as the fight against tiger mosquitoes.
- **Development of a festive ecology:** To debate and raise awareness in a positive way, friendly events will be organised. The aim is to encourage

people to take action and create social ties around issues of health and biodiversity

.

- **Launch of a sponsorship programme for the Rhine-Tortu:** To promote responsibility, appreciation and awareness, a sponsorship programme will be created. It will enable individuals, school classes or associations to become sponsors of a section of the river, a species or a development. This programme will be launched and celebrated with a special event to strengthen cohesion.

5. **Scientific and social evaluation of the project** based on the diagnosis.

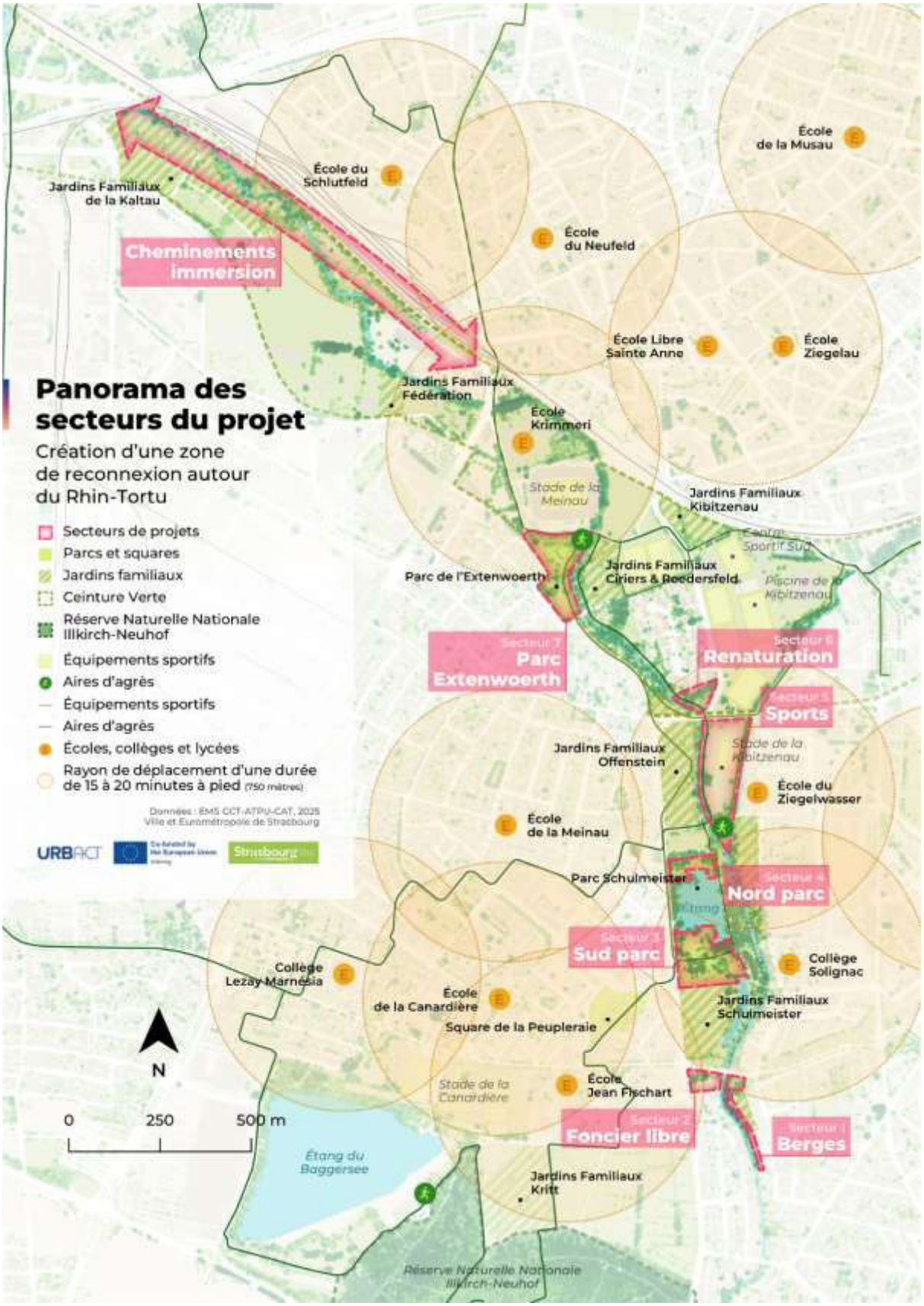


Figure 5: General map of the action plan

(R. Guillois, for the Eurométropole de Strasbourg, August 2025)

Sector 1 – Banks: Contemplation and connection

Objective	Enhance riverbanks as peaceful spaces from a visual and acoustic perspective, encouraging users to contemplate and connect with the natural environment. connection with the natural environment.
Beneficiaries	**People:** Users and residents seeking peace and quiet, environmental education environmental education. **Animals:** Local wildlife (birds, insects) benefiting from new habitats. **Environment:** Stabilised and diversified riverbanks, improvement of the green network.
Planned activities	**Nature:** Densification of vegetation through shrub layers, planting of suitable species. **Facilities:** Creation of observation pontoons with educational panels, installation of furniture for relaxation (benches, deckchairs). **Activities:** Meditation/yoga area, Land Art workshops, artistic trail. artistic trails. **Management:** Zoning of activities to manage conflicts of use in consultation with user associations. Technical study of the upstream dam (sediments, hydrology).

Sector 2 – Free land: Biodiversity refuge

Objective	Create an island of freshness and a sanctuary for biodiversity, protecting this space from human presence to promote the natural regeneration of ecosystems and the preservation of species.
Beneficiaries	**Human:** Local residents (climate benefits), nature observation nature. **Animal:** Wildlife finding refuge and a feeding area. **Environment:** Creation of an island of biodiversity and coolness, ecological succession.
Planned activities	**Nature:** Planting of a dense grove left to evolve naturally (Miyawaki forest), late mowing. **Facilities:** Creation of an overhanging observatory for undisturbed observation. **Management:** Consideration of safety and social use management to prevent negative appropriation.

Sector 3 – South of the Park: Enhancement of existing uses

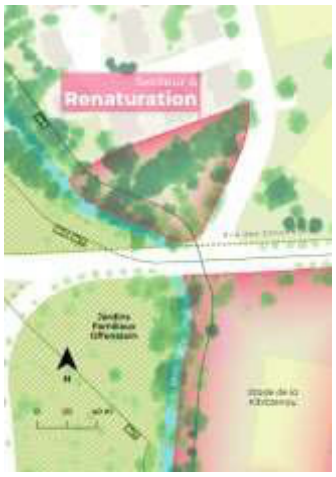
Objective	Enhance the functions of the park, a natural space already frequented and appropriated by residents, by highlighting its ecological and social assets while improving its accessibility and integration into the daily lives of users.
Beneficiaries	**Human:** Current park users, whose living environment is preserved and enhanced. **Animals:** Indirect benefit through the preservation of the existing habitat. **Environment:** Indirect benefit through the maintenance of the existing ecosystem in place.
Planned activities	**Nature:** Do not touch existing trees, preserve the natural character character. **Developments:** No major developments. Potentially a natural wooden amphitheatre if there is strong demand and it can be integrated respectfully. **Activities:** Support gentle uses such as outdoor schooling, contemplation, outdoor activities.

Sector 4 – North of the Park: Restoration of the water feature

Objective	Restore the ecological health of the water body and develop a recreational and educational hub. recreational and educational hub.
Beneficiaries	**People:** Park users for leisure, education and well-being. **Animals:** Aquatic fauna benefiting from improved water quality water quality. **Environment:** Cleaner and more resilient water ecosystem.
Planned activities	**Nature:** Study and pumping of organic matter from the lake, creation of cool spots through tree planting. **Developments:** Use already artificialised areas to create play areas (with self-service materials), a barefoot trail, and educational facilities. **Management:** Park management plan currently being developed based on based on a study conducted on the lake.

Sector 5 – Sports: Refreshment area

Objective	Imagine creating a green space by and for residents for recreational and sporting activities.
Beneficiaries	**Humans:** Opportunity for refreshment, sporting activities. **Animals:** Local wildlife benefiting from a new habitat of considerable size. **Environment:** Combating the urban heat island effect.
Planned activities	**Nature:** Design of a large "refuge" park combining nature (ponds, wetlands) and leisure activities. **Facilities:** Sports fields, fitness trails, and various pathways to manage traffic flow. **Management:** Land monitoring for site clearance.



Sector 6 – Renaturation: Controlled wetland

Objective	Create an educational and functional wetland area, serving as an experimental model illustrating water regulation, pollutant filtration and biodiversity support functions.
Beneficiaries	**Human:** Residents (flood protection), environmental education . **Animals:** Specific specific of wetlands wetlands (amphibians, insects). **Environment:** Restoration of a wetland ecosystem, improvement of water management.
Planned activities	**Nature:** Development of an ecological flood retention area with swales connected to the Rhin Tortu. **Management:** Priority hydraulic study to ensure a permanent current and prevent mosquito proliferation.

Sector 7 – Extenwoerth Park: Social hub

Objective	Concentrate uses to promote social activities and preserve tranquillity elsewhere.
Beneficiaries	**People:** Users looking for meeting places and activities. **Animals:** Limited impact (area of intense use), walking area for pets. **Environment:** Limited impact (area of intense use).
Planned activities	**Facilities:** Areas from picnic with barbecues, secure dog parks for dogs, multifunctional open spaces. **Activities:** Craft market, free expression board, weekly gatherings (dog walking). **Management:** Apply the principle of "naturalness gradient" by marking quieter areas.

Expected results

The success of the project will result in the Rhin-Tortu becoming once again a popular and functional place to live, respectful of all forms of health (human, fauna and flora, ecosystems). Residents of all ages will be able to enjoy the area for walking, relaxing, playing or learning, while respecting the quiet zones and nature.

The banks are planted with vegetation and the corridor acts as an island of coolness during heatwaves and a buffer zone for floods. The project also breaks down barriers in the natural space along the east/west axis with a view to reconnecting it. The project has become a concrete and shared example of what the "One Health" approach can mean for the city.

Implementation methods

- **Proposal for a CIFRE thesis** jointly supported by the Eurométropole de Strasbourg and the CNRS, starting in autumn 2026, to study the functionality of natural environments in an urban context and their importance for environmental and human health within a "One Health" approach, with the Rhine-Tortu as the study site. The project will also focus on the place of these spaces in the lives of residents, seeking to reconcile well-being, awareness, respect for nature, social cohesion and the reduction of inequalities. The experiments will highlight best practices that can be replicated across the rest of the territory.
- **Urban Natural Park (UNP) project** in the area under consideration: opportunity to use the UNP method to engage residents in a project focused on their living environment and health

ACTION SHEET No. 2

Integrate the "One Health" approach into the schoolyard greening project (Oasis courtyards)

Findings and challenges

In the context of global warming, heat waves are becoming more frequent, intense and prolonged. This has a particular impact on school playgrounds, which are often mineral-based and dominated by impermeable surfaces, acting as heat islands that significantly amplify the perceived temperature. Users, both children and adults, are therefore exposed to increasingly extreme conditions that can be harmful to their health.

Concrete-covered school playgrounds can pose other health risks: noise is amplified, causing stress and auditory fatigue. Hard, uniform surfaces limit children's motor and sensory development. The coatings used may also contain chemicals that are particularly toxic to children, some of which may also be endocrine disruptors. Finally, the layout centred on a single sports field encourages gendered and unequal use of space, effectively excluding some children from the main activities and limiting the collective use of the space.

Furthermore, the absence of vegetation and natural elements in these spaces makes them veritable ecological deserts, contributing to habitat fragmentation and thus to the erosion of biodiversity in urban areas. The almost total impermeability of the soil ultimately leads to massive runoff during rainfall, overloading sewerage systems and increasing the risk of flooding.

Since 2020, Strasbourg has been pursuing an ambitious programme to remove minerals and increase vegetation in its school playgrounds through the "Cours Oasis" project, which aims to transform school playgrounds and early childhood education and care (ECEC) facilities into sustainable, resilient spaces that promote well-being. The city has 116 schools, including 61 nursery schools and 55 primary schools, as well as 22 early childhood education centres. Its ambition is to engage two-thirds of these establishments in a transformation process by 2026.

In this context, the "One Health" approach systematises and provides an integrated interpretation of the observed benefits in terms of living health, reinforcing the scope of the project in support of this new narrative. **The challenge is to go beyond greening to design each school playground as a functional and healthy micro-ecosystem.**

It is about recognising that children's health is inseparable from the health of the fauna and flora that surround them and the quality of their environment (air, water, soil). Schools thus become a major lever for building a more resilient and healthy city for all living beings, and for passing on knowledge about the co-benefits of the "One Health" approach to younger generations.

Objectives

General objectives

- **Create resilient school environments that promote all aspects of health:** Transform schoolyards into sustainable, inclusive ecosystems that are adapted to environmental challenges and promote human, animal and environmental health.
- **Raise awareness and increase the involvement of educational stakeholders:** Develop understanding of the links between health, the environment and well-being by training and actively involving stakeholders in the co-construction and management of facilities, and promote the results achieved among children, the parent community, etc.

Specific objectives

- Improve the quality of the school environment by replacing concrete surfaces with permeable, vegetated ground and creating multifunctional, healthy spaces for children.
- Promote ecological, sustainable and participatory management of school spaces.
- Raise awareness among children and educational teams about the "One Health" approach through educational programmes and activities focused on the importance of nature and its preservation.
- Develop partnerships, events and awareness-raising activities in conjunction with the neighbourhood, local communities and parents' associations.
- Leverage the local scientific community by involving children and residents in participatory science projects.

Brief description

The experiment will begin in pilot schools in the Neuhof-Meinau area to co-develop and refine a **"Cours Oasis – One Health" methodology** with schoolyard committees. This phase will test innovative developments and assess their relevance. The aim is to integrate the principles of the "One Health" approach as a guiding thread throughout all

stages of the project, as a matrix guiding development choices, teaching practices and site management:

- **Design:** The project goes beyond simple planting to aim for the creation of diverse ecosystems. The design is participatory and inclusive, ensuring the creation of multifunctional spaces that deconstruct gender stereotypes and meet the needs of all children in terms of active play, quiet areas, creative spaces, etc.
- **In implementation:** The choice of materials focuses on sustainable and healthy solutions, avoiding synthetic soils that can release pollutants and contribute to the heat island effect.
- **Management and facilitation:** The schoolyard becomes an educational tool for addressing the interdependencies of living organisms in a concrete way through new practices and themes. Ecological management (zero pesticides, differentiated mowing, on-site green waste recycling) is the norm and becomes a subject of learning in itself. The approach can be broadened to cover any topic related to health.
- **Going further:** The approach serves as a starting point for considering the development of outdoor schooling and outdoor teaching. It also provides an opportunity to reflect on eco-mobility practices in schools.

Action partners

The Department of Children and Education of the City and Eurometropolis of Strasbourg, in partnership with schools, school committees (teachers, parents, extracurricular activities, RTS), technical services and project managers (landscape architects, architects), local environmental education associations, and the University of Strasbourg to support and evaluate the projects.

Detailed activities

1. Create a diagnostic grid and a catalogue of recommendations based on the three pillars of human, animal and environmental health. This tool can be integrated into project specifications and will serve as a guide for playground committees and project managers. It will include monitoring indicators (e.g. surface temperature, number of species observed, air quality, noise level, children's well-being).

2. **Raise awareness and train stakeholders** to discover and develop skills in the "One Health" approach:

   - Courts committees and project managers: training in the general principles of the and use of the toolkit
   - Teaching teams: training in outdoor teaching methods, how to use the playground as a resource for all subjects, participatory science
   - Technical services (RTS, green spaces): training in differentiated ecological management and maintenance of new facilities.

3. **Conducting the "One Health" assessment** during consultation:

   - Ownership of the project by children and adults, consideration of all needs
   - Identification of habitats and species already present (even modest ones), potential for hosting
   - Establishment of an environmental inventory (soil permeability, heat islands, etc.) to serve as a benchmark for measuring progress.

4. **Designing developments and infrastructure resulting from consultation and incorporating the recommendations of the "One Health" approach**, with consideration given to:

   - Vegetation strata: trees, shrubs, herbaceous plants
   - The creation of micro-habitats: ponds, wood piles, dry stone walls,
   - Integrated water management: swales, permeable soils,
   - Establishing an organic matter cycle: composting, mulching,
     - Materials used: local wood, natural stone, sand, wood chips, avoiding synthetic soils that can release pollutants and contribute to the heat island effect.

5. **Leading the initiative and implementing educational activities:**

   - Set up participatory biodiversity monitoring (citizen science) to develop children's scientific skills and collect valuable data on changes in biodiversity in the playground in response to new developments.
   - Introduce quiet time and nature observation with a view to calm, wonder and reconnection with nature.
   - Conduct awareness-raising activities around food through a vegetable garden or in school canteens with a view to broadening the subject, to educate about healthy, local and seasonal food and its impact on the environment

6. To go further:

- Create a network of "Oasis – One Health" schools to promote the exchange of practices, inter-school visits and knowledge capitalisation. Network all those involved at school level, city services and the National Education system across the educational territory.
- Open up the project to the neighbourhood, for example by mobilising educational communities during the Schulmeister Park festival or by mobilising local residents (who are not parents of pupils) around defining the uses of school playgrounds outside school hours.
- Generate knowledge about home-to-school travel practices and work on home-to-school routes using active design and a playful approach to encourage active mobility (e.g. "cycle to school" challenge).
- Conduct an assessment of nearby natural spaces with a view to developing outdoor school activities and nature sports for children.

Expected results

School playgrounds in the area have become healthy and sustainable places for living and learning, adapted to today's challenges. Concrete surfaces have been replaced by permeable flooring and diverse vegetation, reducing the heat island effect and making temperatures more bearable, even in summer. The playgrounds are designed to
incorporate diverse vegetation, microhabitats for wildlife and multifunctional areas. The addition of relief and natural elements also helps to calm the soundscape of the playground, and the layout promotes equitable use of space, breaking down gender stereotypes.

The success of these projects is shared within a network of active schools, and neighbourhood events highlight the collective dynamic. These initiatives strengthen ties between schools, families and neighbourhood stakeholders by making the playground a real place for meeting and exchange.

Implementation methods

- Preliminary work has been carried out by students on the ECO-Conseil Master's programme (INSA) in the form of a booklet of recommendations and a diagnostic grid.
- Integration of the approach into ongoing "Cour Oasis" projects using existing tools
  .

ACTION SHEET No. 3

Understanding, promoting and developing the acoustic quality in natural spaces

Findings and challenges

Noise reduction is one of the key drivers of the environmental health and sustainable development policy promoted by the Eurometropolis of Strasbourg. In Europe, noise is the second leading cause of premature death after air pollution. Chronic exposure to transport noise causes nearly 12,000 premature deaths and contributes to 48,000 new cases of ischaemic heart disease each year. The social cost of noise in France is estimated at more than €150 billion per year (CNB/ADEME study, June 2021). **Beyond its health impacts, the soundscape is an essential element of the quality of life and well-being perceived by residents. It also helps to ensure a favourable environment for biodiversity, particularly for wildlife.**

The Eurometropolis of Strasbourg has taken steps to improve its understanding of its soundscape by periodically producing strategic noise maps and identifying quiet areas. These tools make it possible to:

- Protect sensitive populations and establishments (schools, hospitals) from excessive noise pollution.
- Prevent the creation of new sources of noise pollution, and preserve and enhance areas already identified as quiet.

In addition, work has been carried out to eliminate noise hotspots in primary schools and social housing.

Mapping data shows a clear improvement since 2012: 8% of the population exceeded regulatory thresholds for road traffic noise in 2012, compared to 6% in 2017 and 2% in 2022.

However, exceeding the WHO recommended thresholds, at which health effects are observed, remains a concern: 60% of the population was still exposed to these levels in 2022 (compared to 63% in 2017). Analysis of the maps also highlights that road infrastructure is the main source of noise affecting residents and ecosystems in metropolitan areas. Noise pollution from rail, industrial and airport activities remains relatively limited.

In this context, access to high-quality quiet areas provides essential auditory rest, which is very beneficial for mental health, particularly for residents of large urban areas. Quiet areas are defined according to two criteria:

- Their status as natural spaces accessible to the public,
- Their low level of exposure to so-called anthropogenic noise (road and rail traffic, human activities, etc.).

Access to these areas provides relief for residents exposed to noisy environments, helping to limit the negative effects of noise on human and animal health. The European Commission emphasises the importance of this factor by using the number of residents with access to such an area (within 300 metres of their home) as a criterion for quality of life.

Identifying, preserving and developing these areas of auditory tranquillity is a major lever for sustainably improving the quality of life in a region, both for human well-being and biodiversity. Access to the sounds of nature promotes sensory perceptions that have positive effects on health in terms of psycho-emotional balance. It also helps to enhance the identity of a place, fostering a sense of belonging to a region.

Objectives

General objective: To expand quiet areas within the region and enhance their sound quality in order to increase their attractiveness.

Specific objectives:

- To characterise the soundscapes of natural spaces.
- Identify and classify the sounds of nature to assess the relative proportions between sounds of human origin (anthropophony) and natural origin (zoophony).
    - Human (anthropophony),
    - Animal (biophony: birdsong)
    - Non-animal geophonic (rustling leaves, running water, etc.)
- Assess the quality of the soundscape in the study area using an indicator combining the three sources of sound,
- Assess their impact on the perception of tranquillity and auditory rest,
- Promote the creation of new spaces with a high-quality sound environment beneficial to users of the site – humans, fauna and flora.

Brief description

The project proposes a renewed interpretation of the territory by listening to and promoting the rich sounds of natural environments. The aim is to move beyond a purely quantitative approach (decibel thresholds) to incorporate a qualitative and sensory dimension to users' sound experience.

To implement this strategy, a qualitative sound audit of the Eurometropolis' natural spaces will be carried out. The qualitative approach taken may also inspire other local authorities in their efforts to combat noise pollution.

The project will include:

- Acoustic surveys at several points in the targeted natural areas,
- Audio recordings to build a sound database,
- The use of techniques for recognising and classifying sound sources: bioacoustics, AI, frequency recognition, etc.
- Analysis of sound intensity, diversity and origin (natural vs. anthropogenic),
- Mapping of soundscapes,
- Qualitative interviews or micro-surveys of users to incorporate human perception
  ,
- The development of solutions to promote the improvement and creation of high-quality quiet areas, enabling sensory experiences through the sounds of nature: water, wind, wildlife, etc.
- Implementation of these solutions in the Rhine-Tortu experimental area

Partners in the initiative

Services of the City and Eurometropolis of Strasbourg, University of Strasbourg and ZAEU, ADEUS, Rhine-Meuse Water Agency, consulting firms such as CEREMA, local associations, wildlife conservation associations

Detailed activities

1. Launch and governance

- Establishment and formalisation of the Steering Committee (COPIL)
- Development of the CCTP in collaboration with partners

2. **Diagnosis**

- Conducting a noise audit in the study area.
- Presentation and validation of the assessment results

3. **Design of solutions:** Development of technical solutions aimed at preservation and Expansion of identified areas of interest.

4. **Implementation and execution:** Deployment of the selected technical solutions.

5. **Evaluation:** Evaluation of the gains achieved through user satisfaction surveys. users.

Expected results

The success of this action will result in:

- Greater recognition of the sound quality of certain natural areas that are not currently classified as "quiet zones" but offer an atmosphere conducive to relaxation.
- The expansion of the perimeter of quiet zones based on broader criteria that combine perceptual dimensions other than sound intensity alone,
- The consolidation of white corridors (networks of peaceful sound continuity for fauna) as a tool for urban and environmental planning,
- Greater consideration of sound biodiversity in development policies,
- Improving residents' well-being and health through easier access to spaces with a pleasant sound environment,
- Implementation of solutions through development and construction work in the experimental area

Implementation methods

- Integration into the Environmental Noise Prevention Plan (PPBE) and support to the work of the Rhine-Tortu Natural Park,
- Request for funding from ADEME

ACTION SHEET No. 4

Study the spread of urban pollution from the Illkirch Innovation Park to the Rhine-Tortu

Findings and challenges

In Alsace, there is a high prevalence of cancer, a serious public health issue whose causes are possibly linked, in part, to environmental pollution. Pollution also impacts biodiversity, with a decline in local populations of insects, birds and amphibians. Unexpected pollutants, including pesticides never used in France, are also found at the outlets of wastewater treatment plants. **These are all warning signs that highlight the need to better understand the links between human activities, diffuse pollution and overall health.**

The Illkirch Innovation Park (PII) is a technology park hosting technological, academic and future-oriented industries. Although located in close proximity to the nature reserve, the site is predominantly urbanised. Its rainwater recovery station, in the form of a vegetated basin with reeds, discharges directly into the neighbouring reserve, with the risk of releasing potential pollutants. In addition, it is bordered by conventionally farmed fields, presenting a risk of pesticide use, and is located in a busy area. It is therefore worth questioning the contamination of the environment by potential pollutants, which may spread beyond the PII. In this context, the park offers a separate sewerage system with a single wastewater outlet, facilitating monitoring of the entire area. Furthermore, this area is characterised by strong interaction between the professional population that frequents it and the surrounding natural environment, with numerous green spaces in the park and the proximity of a nature reserve and a watercourse. This characteristic allows a sociological dimension to be integrated into the study in order to better understand the uses, interactions and expectations of users.

Objectives

General objectives:

- To objectively assess the presence and spread of potential pollutants from the Illkirch Innovation Park (PII) to the Rhine-Tortu,
- To improve knowledge of micropollutants and their sources.

- Highlight blind spots in environmental monitoring.

Specific objectives:

- Establish a diagnosis by characterising the pollutants affecting the various environments of the PII,
- Establish a comprehensive, public database that can be reused in the medium and long term term,
- Compare the findings of this study with the results of the RSDE (search for hazardous substances) monitoring of the Eurometropolis's sanitation system and determine the salient pollutants to be examined in relation to human, animal and environmental health.
- Capitalise on the data and develop additional arguments to raise awareness among professionals and the general public about the "One Health" issue within the PII: impact on the three types of health, disruption of the food web, etc.
- Focus on corrective and remedial solutions and best practices (e.g. nature-based solutions) in a positive approach to reducing pollutant use and emissions

Brief description

The action consists of launching an in-depth scientific study starting at the Illkirch Innovation Park site, which will be extended to the rest of the pilot area depending on the initial results. It will aim to map the pollution present on the site – micropollutants, biocides, drug residues – and to understand their impact on human, animal and environmental health. It will be based on field measurements (water, air, soil, sediments, fauna, flora) and an "eco-exposome" approach to assess the actual exposure of ecosystems and humans. A sociological component may be added to the approach to understand the practices of site users. The results will be capitalised on and disseminated to inform awareness-raising actions and propose concrete remediation or development solutions, particularly with regard to the rehabilitation of the retention basin.

This project will build on existing initiatives, notably the work of the Hubert Curien Multidisciplinary Institute (IPHC) and the cross-border **ReactiveCity** project for cities without biocides. A 36-month thesis project has been proposed to carry out this study.

Detailed activities

1. Scope of the study

Definition of scope and methodology:

- Consulting experts to refine the method following initial field research in July 2025
- Start with a broad screening by major pollutant families (biocides, drug residues, etc.) to define the list of molecules relevant to the three areas of health, without limiting yourself to substances that are already known.
- Take into account the seasonality of pollution sources (2 to 4 measurement campaigns per year).

Funding plan and schedule:

- Validate the financing plan (estimate: €290k, including a €130k thesis and €35-40k for analyses).
- Set a start date for the project
- Launch the project via an internship during the next ReactiveCity project campaign.
- Recruit a PhD student based on the existing agreement between the Eurometropolis and the Hubert Curien Multidisciplinary Institute (IPHC)

2. Field studies and analyses

Pollution mapping:

- Carry out measurements at the PII in terms of sewage discharges and the rainwater network (lagoons), upstream and downstream to the outlet
- Analyse a wide variety of environments: water, air, soil, sediments, bacteria, plants, invertebrates, insects, birds.

Eco-exposome approach:

- Conduct a study on the eco-exposome to understand the joint exposure of humans and animals and search for common denominators.
- Assess the toxicity of identified pollutants.
- Based on the results, consider conducting joint studies with INSERM to link human health and environmental studies.

Sociological component:

- Conduct a sociological study of the lifestyles of the public (residents, professionals in the area) to understand how this pollution could be generated and how micropollutants and other pollutants affect the daily lives of users, different environments and the food web.

3. Solutions, capitalisation and awareness-raising

Proposed developments:

- Propose a redevelopment of the retention basin, taking into account actual water flows and pollutants, to make it more efficient and buffer excess water and accommodate the first rains, which are currently diverted to the wastewater network.
- Help set up a recycling and recovery system for green waste from the basin (e×: production of liquid manure for green spaces).

Outreach and dissemination:

- Create an awareness booklet and other educational tools to be included in the "One Health" awareness strategy to encourage a change in practices.
- Organise thematic conferences for the general public and students (ENGEES, Faculty of Medicine and Pharmacy, etc.).
- Set up a citizen monitoring committee to support the thesis. This committee would meet once or twice a year to monitor the progress of the research. This would help to allay fears, facilitate the appropriation of results and prepare for ongoing outreach work.
- At the same time, launch a participatory science initiative based on a simple protocol on the water quality of the Rhin-Tortu (e.g. monitoring of bio-indicators) in order to involve local residents immediately without waiting for the results of the thesis and respond to the need for short-term action.

Partners in the initiative

City and Eurometropolis of Strasbourg, laboratories of the University of Strasbourg (e.g. IPHC), ReactiveCity project and potentially INSERM, PII stakeholders and representatives.

Expected results

The project enabled a precise and shared diagnosis to be made of the sources, distribution and impacts of micropollutants on living organisms in the sector. The method developed can be replicated and used for comparisons. The data, which is public, serves as a basis for a
constructive dialogue with stakeholders in the sector. The rainwater retention basin was redesigned using nature-based solutions, becoming a demonstration site. The research findings were translated into powerful awareness-raising tools that are widely used by local stakeholders, contributing to collective awareness and behavioural change.

Implementation methods

- Project launch via an internship supported by the ReactiveCity project
- Proposal for a 36-month thesis based on the existing agreement between the Eurométropole and the Hubert Curien Multidisciplinary Institute (IPHC)

ACTION SHEET No. 5

Studying the impacts and interactions associated with feeding animals in urban areas using a "One Health" approach

Findings and challenges

Feeding animals in cities, whether intentional (throwing bread to ducks) or unintentional (poorly managed rubbish bins), is a complex phenomenon at the intersection of public health, animal health and environmental health.

It can lead to an increase in opportunistic species (rats, pigeons, etc.), causing nuisance and health risks: zoonoses, pollution of aquatic environments and soil. It also causes diseases in animals, creates dependency and disrupts ecological balance. The impacts of uncontrolled feeding are therefore mostly negative.

However, the subject underlies certain social issues, based on deep-seated motivations. The act of feeding often stems from a positive intention, motivated by an emotional bond, a need to care for and maintain contact with nature. This dissonance between the intention – care – and the actual impact – nuisance, deterioration in the health of the animals being fed, zoonoses – is at the heart of the issue and requires an integrated approach.

The issue is also ambivalent: beyond the negative impacts, feeding can also have positive effects. For humans, it can be a source of well-being and social connection. For wildlife, targeted and controlled feeding (in terms of food type, quantity and timing) can promote the survival of certain species in winter or enable health monitoring of populations (e.g. via pigeon lofts). The challenge is therefore to distinguish between harmful practices and potentially beneficial ones.

Given these various findings, animal feeding is a particularly interesting subject for studying interactions between humans, animals and the environment, and thus for defining an innovative method of analysis based on the "One Health" approach.

Objectives

General objective: To deepen knowledge of animal feeding in order to objectively assess the resulting interactions within a "One Health" approach and seek a balanced management approach that is beneficial to everyone's health.

Specific objectives:

- **Qualify and quantify the phenomenon:**
    - Identify and map feeding hotspots in the area, particularly in the Neuhof/Meinau neighbourhoods and the Rhine-Tortu sector.
    - Characterise practices on the basis of a sociological diagnosis: who feeds, what, where, and why?
- **Assess the impacts in order to prioritise action:**
    - Highlight the "invisible" interactions between human practices, fauna, flora and micro-organisms
    - Assess the balance of positive and negative impacts on all aspects of health
    - Identify the most impactful feeding practices in order to prioritise the issues and target future actions
- **Define a management strategy and co-develop solutions:**
    - Propose alternatives to wild feeding that respond to residents' underlying motivations
    - Define frameworks for responsible feeding management through regulated practices and targeted recommendations
    - Raise public awareness of the complexity of urban ecosystems to encourage the adoption of new behaviours.

Brief description

The action consists of conducting a multi-dimensional study of animal feeding to understand its causes and its overall impact on all aspects of health.

The approach will be divided into several phases:

- **State of the art and analysis of the existing situation:** Bibliographic synthesis and compilation of data already available within the EMS services and partners.

- **Field studies:**
    - **Ecological component:** Sampling and analysis (water, soil, air), fauna/flora inventories at control sites and feeding sites.
    - **Sociological component:** Surveys, interviews and observations to understand the practices and motivations of residents.
    - **Participatory science:** Involvement of citizens (through "clean walks", observation surveys, etc.) to map the phenomenon and jointly define research questions.
- **Awareness-raising and communication:** Creation of educational tools and organisation of information sessions for local residents, schoolchildren and the general public.
- **Development of alternatives:** Based on the results, proposal of concrete actions to change behaviours.

Detailed activities

1. Scoping and state of the art

Review of the literature on existing data on the subject, both locally and in scientific publications

2. Characterisation of the phenomenon locally

- Compilation and localised extraction of existing data on our territory via community services in partnership with naturalist associations
- Conduct field observations in the Rhin-Tortu sector and surrounding areas to understand the dynamics of intentional and unintentional feeding and identify the locations and audiences involved.
- Involve residents in the assessment through a participatory science campaign in which residents are invited to report feeding areas they have identified and the type of food given (combining data collection with initial awareness-raising steps).
- Mapping of intensive voluntary feeding hotspots.

3. Understanding the social dynamics of feeding

Sociological surveys of identified areas: Conducting interviews to understand motivations, representations and "imaginings" related to animals and the act of feeding, in conjunction with the results of the bibliographic study already conducted

4. **Study of the impact of feeding on ecosystems and environments**

   - Study of the advisability of carrying out:
     - Samples from environments (water, air, soil) for chemical or biological characterisation of the potential impact of feeding
     - Fauna/flora inventories
   - Modelling of the food chain validated by observations
   - Prospective scenarios varying feeding (absence or presence)

5. **Analysis and synthesis**

   - Processing of collected data
   - Drafting of a study report to be used for subsequent phases

6. **Awareness raising and communication**

   - Working with residents to develop a participatory communication campaign that takes into account what matters to people and is in tune with their imaginations, based on the results of the study conducted
   - Conduct awareness-raising activities in local primary and secondary schools so that young people can become vectors of information on healthy eating for adults.
   - Use fun and educational tools to explain the complexity of ecosystems, the diets of different species, and the impacts of feeding; organise activities around iconic local species; organise "clean walks" to raise awareness about reducing waste that may attract invasive species.
   - Design explanations and prohibitions painted directly onto street furniture and bridges to prevent the frequent vandalism of signs.

7. **Alternatives and management**

   - Set up educational and nature and animal observation facilities along the Rhin-Tortu to meet residents' needs to reconnect with nature by replacing the act of feeding.
   - Take measures to limit unintentional feeding linked to rubbish bins and waste waste
   - Coercive approach – as a last resort: Consider how to penalise citizens for inappropriate feeding (uniform, amount of fines, prior warnings)

Action partners

City and Eurométropole management services, University of Strasbourg and research laboratories involved via the ZAEU, nature conservation associations (LPO, Alsace Nature, GEPMA) and neighbourhood associations, residents

Expected results

The success of this initiative will result in a better understanding and quantification of animal feeding dynamics in urban areas, with detailed mapping of the most affected areas in the Eurometropolis and an in-depth analysis of associated practices. The expected results also include the clear identification of the environmental and health impacts of feeding through scientific analysis and

an assessment of the effects on local fauna and flora. **The study serves as a model for analysing a phenomenon through the lens of "One Health", based on an understanding of interactions and impacts on all aspects of health.**

Sustainable behavioural changes have been observed among residents with regard to feeding practices, thanks to awareness-raising initiatives and their involvement in participatory approaches. Finally, alternative solutions and sustainable management measures are being developed jointly with a view to achieving a balance between human well-being, animal health and the preservation of the urban ecosystem.

Implementation methods

- Review of the bibliography carried out during a two-month internship in January 2025
- Implementation of the study through one or more internships that could be carried out within the framework of the ZAEU
- Use of results in the context of the "One Health" awareness strategy
  Health" awareness strategy

ACTION SHEET No. 6

Implementing a

"One Health" awareness programme in the pilot area

Findings and challenges

The "One Health" approach can be complex and little known to the general public. For it to be adopted and translate into lasting behavioural changes or positively reinforce actions already underway, it must be embodied and translated into everyday situations that everyone can understand. The main challenge is to avoid top-down communication and instead encourage active and shared ownership by local residents and stakeholders, drawing on local representatives and ambassadors (see method sheet no. 3).

Objectives

General objective: To firmly establish an understanding of the "One Health" approach among residents and stakeholders in the pilot area and enable them to identify the interdependence of health issues in everyday situations.

Specific objectives:

- Popularise the "One Health" approach in order to make it accessible and concrete for different audiences
- Identify, mobilise and equip a network of ambassadors and volunteer relay structures to carry out awareness-raising activities
- Plan, coordinate and implement concrete awareness-raising actions adapted to the local context
  local context

Brief description

This action aims to implement the "One Health" awareness strategy (see method no. 3) specifically in the area around the Rhin-Tortu.
method no. 3) specifically in the area around the Rhine-Tortu.

It is based on a multi-stage approach:

- Widespread information to raise awareness of the approach among as many people as possible,
- Identification of ambassadors: individuals and organisations to act as intermediaries,

- Co-design of tools and actions with these ambassadors,
- Rolling out awareness-raising initiatives in the field, targeting a variety of audiences and locations (schools, nursing homes, allotments, community centres, local events, etc.)

Partners

Eurométropole de Strasbourg services, SINE Bussière and environmental education network, environmental associations, "One Health" ambassadors, local relays (socio-cultural centres, schools, associations, etc.).

Detailed activities

NB: This fact sheet is the cornerstone of awareness-raising and, as such, also brings together the communication and awareness-raising actions identified in the other fact sheets of the action plan.

Creating shared experiences and nature walks:

- Identify and promote local nature areas, including the Rhine-Tortu and its surroundings, Schulmeister Park and the Neuhof-Illkirch nature reserve.
- Conduct a survey among residents to identify the places and walks they enjoy in their neighbourhood.
- Establish a citizen sponsorship programme for the Rhin Tortu.
- Organise themed walks led by the Meinau and Neuhof CSCs or the residents themselves, in partnership with environmental associations such as Alsace Nature.
- Organise discussions on biodiversity in collective housing to create local momentum (with local landlords including OPHÉA and Alsace Habitat, signatories of the "Tous unis pour plus de biodiversité" charter).
- Organise creative, artistic or contemplative activities along the Rhine-Tortu linear corridor.

Workshops and educational tools:

- Use the "One Health" awareness kit to develop workshops and games within the CSCs to raise awareness in a fun way.
- Use the Maison des Projets to promote the approach and ensure that it is applied in project development and with target audiences.
- Create popular science booklets and educational tools based on the results of scientific studies and organise popular science conferences.
- Co-develop fun communication campaigns with residents on topics of their choice, such as animal feeding.

Mobilisation of target audiences:

- Identify ambassador schools (e.g. the new Krimmeri school) and train the entire educational community – teaching staff, extracurricular and canteen staff, administrators – in the challenges of "One Health"; use the greening of school playgrounds as a way to reach and raise awareness among the direct and indirect users of these spaces; Develop a programme of dedicated actions, for example organising workshops on taste in canteens with local producers, raising awareness of noise in canteens, developing outdoor education and participatory science with children, reflecting on reducing endocrine disruptors in cleaning products, etc.
- Use eco-prescription awareness tools to reach healthcare professionals and healthcare teams in establishments such as nursing homes,
- Conduct specific discussions with users of family gardens, for example by addressing the issue of tiger mosquitoes to introduce and illustrate the "One Health" approach
- Involve Racing Club de Strasbourg supporters and local sports associations in issues related to sport and health, the preservation of natural resources, etc.
- Educate stakeholders at the Illkirch Innovation Park through themed after-work conferences on the "One Health" approach

Installations: Create educational panels and observation facilities along the Rhin-Tortu to inform and raise awareness about biodiversity, waste, animal feeding, etc.

Expected results

A network of local ambassadors and partners (CSC, schools, associations, etc.) is active and independently carries out awareness-raising activities in the pilot area. The approach "One Health" is regularly highlighted at neighbourhood events. Residents are able to explain in their own words what the topic means for their daily lives and their neighbourhood, and they have adapted some of their daily practices (waste management, gardening, relationship with animals, etc.).

Implementation methods

- Awareness-raising activities can be carried out through various existing channels: calls for projects from the local authority (CLS, environmental education, zero waste), agreement between the Eurométropole and the SINE, national calls for projects
- The PNU approach devised for the sector will enable residents to get involved and carry out dedicated awareness-raising activities

METHOD SHEET No. 1

How to develop a project that promotes "One Health"?

The purpose of this tool is to guide project leaders in the practical and concrete integration of One Health principles. The aim is to promote urban and regional development that simultaneously contributes to improving human, animal and environmental health. This involves taking into account the interconnections between different environments (natural and urban), communities (human, animal, plant and microbial) and their uses. This method is based on experiences from the URBACT project, with the Rhine-Tortu ecological corridor serving as a demonstrator to refine the approaches.

1. Assess needs and potential impacts

- Use **a detailed diagnostic grid** covering human, animal and environmental dimensions to identify the potential impacts of the project on all aspects of health
- **Conduct a participatory analysis of the territory**, involving various local users and stakeholders, in order to better understand the environments, health issues and existing uses. This helps identify priorities to be taken into account in the project.
- **Conduct in-depth environmental studies**, analysing aspects such as pollution, biodiversity, soil quality and noise pollution. These studies will provide essential data for assessing the project's impact on the environment and defining appropriate solutions.
    - ⇨ Examples: Hydromorphological diagnosis and analysis of riparian vegetation, study of the presence of micropollutants in soil and water, noise pollution inventory, and assessment of impervious areas.

2. Ensure the project delivers co-benefits for all aspects of health

- **Translate the issues identified beforehand into concrete and measurable operational objectives**, systematically integrating the principles of social and territorial equity to ensure that the benefits of the project are distributed fairly among all population groups
  .
- **Assess the potential impact of the project on the three dimensions of health** (human, animal and environmental) and rework the elements of the project until they are truly aligned with the principles of "One Health", thus ensuring positive effects on all components.

3. Meet identified needs while preserving ecosystems

- **Implement differentiated zoning** that allows the space to be structured according to different uses: observation areas (to promote tranquillity), quiet areas (to reduce noise pollution), and active areas (intended for human activities).
- **Take an integrated approach to the use of materials and facilities that promote overall health** by avoiding the use of materials such as concrete, bitumen or rubber residues. The focus will be on local plants, recyclable materials and sustainable developments that do not generate waste.
- **Limit conflicts of use through design**, by defining development plans that integrate biodiversity, meet diverse uses and respect a resource-efficient approach.
    - ⇨ Examples: Creation of cycle paths, educational gardens, areas for contemplation areas, implementation of green, blue and black infrastructure (to encourage nocturnal wildlife), creation of grass or clay footpaths, and soil de-sealing to restore water infiltration.

4. Promoting ownership and sustainability of the project

- **Co-develop the project with residents and local stakeholders,** involving all parties from the earliest stages of planning to ensure genuine community ownership of the project.
- **Rely on local representatives and ambassadors** to promote the approach and encourage user participation throughout the project.
- **Organise awareness-raising activities to strengthen community engagement**: participatory planting days, workshops with local schools and associations, and community projects where residents can actively contribute to the implementation of the project.
  the project.
- **Identify potential disruptions**, particularly financial ones, and develop a diversified financing plan to ensure the long-term sustainability of the project.

5. Adapt to feedback from the field and take a systematic approach

- **Start small** to allow for continuous adaptation of the project based on feedback from the field. This evaluation process makes it possible to observe the actual uses of the site,
  any conflicts or unexpected effects, monitor visitor numbers, and gather feedback from users
- **Adjust developments based on feedback from the field**

6. Ensure that positive impacts are sustainable

- **Establish regular monitoring of indicators** related to health, biodiversity and environmental quality (air, soil, water). This monitoring must be carried out over the long term to ensure that the project's objectives are achieved and that the impacts are positive.
- **Organise annual audits** in collaboration with stakeholders in order to maintain a participatory monitoring dynamic, and conduct interviews with residents to assess the project's progress and its alignment with local expectations.
- **Rely on measurable and concrete results**, such as improved health. perceived by users, the reduction of pollution and nuisances, and the increase in biodiversity, to demonstrate the benefits of the project and ensure its sustainability.

METHOD SHEET No. 2

How to establish a "One Health" diagnosis for a site or establishment?

The aim of this tool is to provide an integrated methodology for assessing the interactions between human, animal and environmental health at the local level, while offering recommendations and concrete solutions to improve the resilience of the sites studied.

1. Preliminary analysis and definition of objectives

Understanding the local context:

- Identify site-specific health issues (e.g. zoonoses, environmental contamination, local epidemics, health issues),
- Integrate an analysis of socio-economic and health inequalities to better identify vulnerable populations,
- Determine the human, animal and environmental interactions specific to the or establishment,
- Identify the stakeholders involved (managers, health professionals, veterinarians, ecologists, local authorities, users) and define their roles (decision-making, operational, advisory)

Set clear objectives:

- Diagnose specific risks (e.g. spread of a zoonosis, water or air contamination),
- Assess interactions between different health systems,
- Propose recommendations to reduce risks and improve the site's resilience, incorporating participatory actions

2. Structure of the diagnostic tool

Adapt the diagnostic tool to different scales:

- Micro scale: Diagnosis focused on a specific building or site
- Intermediate scale: Diagnosis of a park, neighbourhood or small urban area
- Macro scale: Diagnosis at the level of a territory or protected natural area

Selecting key indicators:

- Human health: Disease incidence, exposure to pollutants, quality of care, socio-economic and qualitative data (perceptions and behaviours),
- Animal health: Veterinary monitoring (wildlife, livestock, pets), antimicrobial resistance, overpopulation,
- Environmental health: Monitoring of soil, water and air, local biodiversity, bio-indicators (lichens, aquatic plants)

3. Data collection and integration

Required data:

- Quantitative: Environmental measurements (water quality, soil pollution, air pollution levels, temperature, etc.), epidemiological data,
  air pollution, temperature, etc.), epidemiological data,
- Qualitative: Surveys of residents and users, observations of agricultural or industrial practices, etc.
  or industrial practices, etc.

Tools to be used:

- Environmental sensors to measure key parameters (water, air, soil),
- Data management software (GIS for mapping risk areas, epidemiological databases
  epidemiological databases),
- Mathematical models or decision support systems to simulate dynamics

Baseline status and comparisons:

- Establish a baseline for each indicator using protected areas or
  low-impact areas as a reference,
- Compare results with other similar territories to contextualise the data

4. Identify critical areas and risk chains

Spatialise the data:

- Map areas of vulnerability: pollution hotspots, nuisances, areas with
  high human density, proximity to impactful activities, protected areas,
- Identify interaction flows: circulation of pathogens or pollutants via water, soil or air

Prioritise risks:

- Prioritise issues according to their severity, urgency and potential impact
- Assess cumulative risks and synergistic effects

5. Develop and test the tool

Create a dashboard: Interactive system bringing together key indicators, enabling trends to be identified and alerts to be generated based on critical thresholds

Test the tool:

- Conduct a diagnostic assessment over a defined period (e.g. 6 months) to validate indicators and models,
- Adjust parameters based on results obtained and stakeholder feedback

Risk scenarios: Develop forward-looking scenarios to anticipate potential impacts and define adaptation strategies.

6. Recommendations and implementation

Risk management and mitigation proposals:

- Reduce identified sources of pollution or risky practices
- Make recommendations to strengthen related local public policies.
- Introduce agroecological practices and sustainable strategies

Feasibility: Assess the feasibility of the proposed solutions and prioritise actions based on available resources

Follow-up plan:

- Integrate a continuous monitoring strategy with regular updates of key indicators,
- Train local stakeholders in the use of the tool and the interpretation of results

Time planning: Establish a timetable for each short-, medium- and long-term action

7. Communication and participation

Awareness raising:

- Produce media communication accessible (infographics, interactive presentations interactive)
- Organise participatory workshops and awareness campaigns for residents and stakeholders

Active participation:

- Encourage citizens to participate in data collection (participatory science) and monitoring of actions
- Share results in a transparent, educational and accessible manner to encourage engagement

METHOD SHEET No. 3

How to implement a One Health awareness strategy?

The One Health approach can sometimes seem complex; to be adopted, it must be embodied and understood by all. The challenge is to move from top-down information to active ownership. The aim of this tool is to provide a methodology for embedding a lasting understanding of the One Health approach and raising awareness of its challenges among the inhabitants and stakeholders of a region, based on active ownership by local representatives, known as ambassadors.

1. Preparation

- **Search for existing tools (benchmark)**: identify a wide variety of existing media and tools so as not to reinvent what already exists
- **Survey of potential ambassadors:** understand the level of knowledge, awareness, expectations and specific concerns of the target audiences
- **Key data**: prepare a common knowledge base and source key data on the various topics to lend scientific credibility to the approach.
- **Implementation**: making the "One Health" approach accessible by using concrete examples from everyday life to put interactions into perspective and help people understand that everyone already plays a role in health on a daily basis.
- **Popularisation:** identifying sources of information to be popularised and writing content intended for non-specialist audiences.

2. Information

- **General public:** widely disseminate information to residents through various means (conferences, social media, magazine publications, presentations at events, etc.).
- **Target audiences**: disseminate targeted and tailored information to target groups that are likely to be receptive and ready to engage – health and social issues, environment and agriculture, education, culture and research, economy and business.

3. Identifying ambassadors

- **Recruitment**: identify individuals and organisations that showed interest during the information phase and who spontaneously express an interest in participating in awareness-raising activities in their community
    - ⇨ Examples of potential ambassadors: Leaders of socio-cultural centres, teachers, doctors, members of associations or citizen groups, gardeners, corporate CSR officers, etc.
- **Equip:** co-design appropriate awareness-raising formats and tools with ambassadors, create an awareness-raising kit based on the benchmark carried out, organise training courses dedicated to ambassadors
- **Networking**: build a network of "One Health" ambassadors

4. Roll out awareness-raising actions

- **Planning**: organising and coordinating the implementation of awareness-raising activities aimed at the entire population of the territory.
- **Facilitation**: create group dynamics within the network of ambassadors to facilitate discussion and collective skills development.
- **Monitoring and evaluation:** plan for annual monitoring and review of actions undertaken as part of the awareness-raising strategy.

CONCLUSION

This action plan marks an important turning point in the Eurometropolis of Strasbourg's ambition to implement the "One Health" approach in an integrated and cross-cutting manner. This project, which is part of a long-term vision, reflects our desire to translate theoretical principles into concrete actions.

The partnership dynamic, driven by the local URBACT group, was essential in bringing our strengths together and truly united stakeholders around a common goal: ensuring better health for all, taking into account all issues related to the environment, human health and animal health. The support and commitment of local actors were powerful drivers that demonstrated that such an approach is not only possible, but essential to guarantee the long-term health and well-being of our region.

This synergy has been beneficial in that it has generated valuable emulation, conducive to innovation and experimentation with new solutions. Participating in the URBACT programme has thus been a real catalyst for moving from reflection to experimentation and making the
"One Health" approach operational in our territory.

As we enter the implementation phase, we are fully committed to maintaining this momentum and continuing to mobilise all stakeholders, whether public authorities, researchers or associations. Awareness-raising, citizen involvement, innovation and research will continue to shape our actions to make the Eurometropolis of Strasbourg a pioneer in global health.

We would like to express our sincere thanks to URBACT, as well as to all our local partners for their commitment and valuable contributions. This project represents much more than a step forward for our region; it embodies a model of cooperation and innovation that we are convinced will have lasting benefits. Together, we have laid the foundations for a concrete and shared approach, where "One Health" becomes a central focus of our public policies and future actions.