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LIFE MERCURY-FREE

Complex Awareness Raising and Behaviour Change for the Mercury-Free City Environment

Deliverable 6.4 The After-LIFE Plan

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1 Executive Summary

The Project Managing Committee developed the After-LIFE Plan for further application of the project results to new locations and to other types of hazardous substances and materials in household activities. The activities will be connected with the realised Mutual Learning Exercises in the context of the Horizon 2020 Policy Support Facility prepeared by working groups from UNICAM, UEVORA and InnoHive.

The representatives of the cities planned for replication after the project timeline and during 5 years after the project end will be also involved in the process. At the same time, for ensuring credible sustainability and exploitation, there will be conducted a work for signing of the Cooperation Agreement between the project consortium members and interested representatives of the project control cities, future replicators and other interested institutions for creation of an international Non-Governmental Organization "Association of the Mercury-Free City communities". The After-LIFE Plan will be adopted and the Cooperation Agreement will be signed at the project's last consortium meeting in M35. The Association will be created at its founding meeting beyond the project timeline.

During the project the mercury-waste collection points in each pilot city will be funded by the local communities. After the end of the project, mercury-waste collection points will be funded further by the local communities.

The aim of After-LIFE Plan is to guarantee the exploitation and sustainability of the project results. To spread the project experience to as many cities in the EU and other states, as possible. Duration: M30 – M36. Target audience: direct - educational institutions, municipal public authorities, NGOs, public activists active in the environmental work from project control cities; final – population of the EU cities, which replicate the project experience, as well as of the Ukrainian-speaking and Russian-speaking states – the EU neighbours.

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2 THE AFTER-LIFE Plan

2.1 Replicate successful strategies in new geographic regions

2.1.1 ITALY

The replication of LIFE Mercury-Free strategies in Italy will be spearheaded by the University of Camerino (UNICAM), which will act as the key knowledge transfer and

capacity-building hub. Camerino and the Marche Region present an ideal starting point because they combine urban, semi-urban, and rural realities with a mix of traditional practices and modern waste management challenges. The replication strategy will not only transfer technical know-how but also adapt outreach and behavioral change tools to the Italian cultural and policy context. By positioning Camerino as the "first Mercury-Free hub" in Italy, UNICAM will demonstrate the feasibility of integrating environmental education, citizen engagement, and infrastructure upgrades within local governance frameworks.

2.1.1.1 Strategy for Geographic Expansion of LIFE Mercury-Free:

- **Use Camerino and the Marche Region as the first Italian hub**: Pilot activities in Camerino will allow for testing and refinement of methods in a manageable urban context, while simultaneously reaching surrounding rural areas where hazardous waste disposal practices are less structured.
- **Expand through agreements with regional environmental authorities and universities**: Formal cooperation with Marche Region waste authorities and nearby academic institutions (e.g., University of Perugia) will provide institutional credibility and scale.
- **Integrate replication into regional environmental planning**: Activities will be aligned with the Marche PRGR (Regional Waste Management Plan), ensuring coherence with existing strategies and avoiding duplication.

2.1.1.2 Identify Priority Regions

The Italian replication will prioritize areas where the risk of mercury and other hazardous substances is highest and where the LIFE Mercury-Free approach can complement existing initiatives. Priority will be given to regions with:

- **High use of mercury-containing products** – particularly in older households and healthcare facilities still relying on thermometers and fluorescent lamps.
- **Limited infrastructure for safe disposal** – many smaller municipalities lack separate collection systems for hazardous household waste.
- **Active environmental or health programs** – regions that already run awareness or health initiatives can integrate LIFE methods more easily, increasing impact and efficiency.

2.1.1.3 Give target regions:

- Marche (Camerino, Macerata, Ancona) – Initial hub, combining small-town context (Camerino) with larger cities (Ancona) for scalability.
- Umbria (Perugia, Terni) – Comparable socio-economic and environmental context, with strong potential for collaboration between UNICAM and the University of Perugia.
- Abruzzo (L'Aquila, Teramo) – Medium-sized towns with active university networks and potential to link to seismic reconstruction efforts where environmental renewal is a priority.

- Lazio (Rieti, Viterbo) – Entry point into larger-scale replication, connecting central Italy cities to Rome's influence and national-level policy dialogue.

2.1.2 GREECE

2.1.2.1 Strategy for Geographic Expansion of LIFE Mercury-Free:

In Greece, the strategy for the geographic expansion of LIFE MERCURY FREE focuses on extending the project's impact beyond the pilot activities in Larissa to a broader network of municipalities, schools, and institutions nationwide. The approach is based on leveraging the lessons learned, methodologies developed, and best practices validated during the initial implementation phase. By building on the strong collaboration with local stakeholders, the project aims to replicate successful models in other Greek regions with similar environmental and social contexts.

The expansion strategy prioritizes municipal engagement, as local authorities are key actors in waste management, public health initiatives, and community awareness. Partnerships with municipalities across Thessaly and Central Greece are being explored to pilot improved mercury collection systems, enhance hazardous waste infrastructure, and promote citizen awareness campaigns. At the same time, collaboration with national authorities and regulators ensures that these local initiatives are aligned with Greece's national environmental strategies and European directives on hazardous substances. Equally important is the role of education and academia in scaling up project results. By engaging universities, research institutes, and schools across Greece, LIFE MERCURY FREE aims to integrate mercury-free awareness into curricula and research agendas, fostering long-term sustainability and intergenerational knowledge transfer. Through this multi-level strategy—combining local implementation, regional partnerships, and national policy alignment—the project will establish a strong foundation for replicability and broader adoption of mercury-free practices across the country

2.1.2.2 Identify Priority Regions

The strategy for geographic expansion in Greece prioritizes regions where LIFE MERCURY FREE can generate the greatest impact by addressing both environmental risks and societal needs. Building on the project's successful activities in Larissa, the approach emphasizes scaling up to additional municipalities, schools, and institutions across the country.

The expansion focuses on three main criteria:

High use of mercury-containing products: Areas with widespread reliance on products such as thermometers, fluorescent lamps, and batteries are targeted first, as these pose the highest risk for mercury release into households, waste streams, and the environment. Local awareness campaigns and improved collection schemes will be piloted to reduce unsafe disposal practices.

Limited public awareness or infrastructure: Municipalities with insufficient hazardous household waste management systems, or low citizen awareness of mercury risks, are considered priority areas. By providing training, educational materials, and practical guidelines, LIFE MERCURY FREE can bridge these gaps and strengthen local capacity.

Integration with existing initiatives: Expansion efforts also build on regions where environmental or health initiatives are already in place—such as climate action projects, circular economy pilots, or school-based sustainability programs. Embedding

LIFE MERCURY FREE methods into these initiatives ensures synergy, cost-effectiveness, and long-term sustainability.
Through this targeted approach, the project will not only broaden its geographic footprint in Greece but also maximize impact by aligning interventions with local needs and opportunities, creating a strong foundation for replicability at the national level.

2.1.2.3 Give target regions:

Priority is the Region of Thessaly and the Central Greece

2.1.3 PORTUGAL

2.1.3.1 Strategy for Geographic Expansion of LIFE Mercury-Free:

No description

2.1.3.2 Identify Priority Regions

Focus on areas with:

- High use of mercury-containing products (e.g., thermometers, fluorescent lamps, batteries).
- Limited public awareness or infrastructure for hazardous household waste.
- Existing environmental or health initiatives that could integrate LIFE Mercury-Free methods.

Within Portugal, the region of Évora represents a priority area for the geographic expansion of LIFE Mercury-Free. The city of Évora, as the urban center, concentrates population, services, and institutions that can amplify the project's visibility and impact. At the same time, the surrounding rural municipalities present specific challenges related to hazardous waste collection and public awareness. This combination makes Évora an ideal testing ground for strategies that address both urban and rural realities.

Évora city and its surrounding communities still generate significant quantities of mercury-containing waste. Hospitals, clinics, schools, and households frequently use or store products such as fluorescent lamps, batteries, and thermometers. Older populations in rural areas are more likely to retain mercury-based devices at home, while urban facilities accumulate higher volumes of such products through everyday use. These patterns underline the importance of developing targeted collection and awareness campaigns in both contexts.

Rural municipalities in the Évora district face limited access to selective waste collection infrastructure, with fewer ecocenters and specialized collection points compared to metropolitan regions. Public awareness of the risks associated with mercury is also lower, especially among older residents. These gaps create risks of improper disposal and potential environmental contamination, reinforcing the need for LIFE Mercury-Free interventions. By contrast, the urban center of Évora offers stronger infrastructure, but still requires awareness-raising initiatives to ensure correct disposal at the household level.

Évora benefits from a strong institutional and community framework that can be mobilized to support LIFE Mercury-Free. The University of Évora provides expertise, outreach capacity, and monitoring potential. Initiatives such as Ecopilhas, already active

in battery collection, can serve as practical platforms for expansion. Schools in the region are also well placed to act both as stakeholders and as dissemination channels, ensuring that the project reaches key groups including seniors, families, and students.

Based on the latest national waste management frameworks and regional data, the district of Évora is a prime candidate for the geographic expansion of LIFE Mercury-Free. Évora combines an urban center with extensive rural hinterlands, reflecting many of the structural challenges identified in national plans such as **PERSU 2030** ("Plano Estratégico para os Resíduos Urbanos 2030"). According to PERSU 2030, Portugal produced approximately **5 million tonnes** of urban waste in 2019, equivalent to about **511 kg per inhabitant per year**, with goals to reduce per capita production by roughly 15% by 2030. Relatório do Estado do Ambiente+2Green Savers+2 Évora, via its intermunicipal system (GESAMB), is already recognized as a region needing a tripling of recycling rates by 2030 to meet national and EU targets. ODigital.pt

Focus on Areas with High Use of Mercury-Containing Products
While specific statistics on mercury-product stock (thermometers, old batteries, etc.) in Évora are scarce, indirect evidence points to significant ongoing usage: older households in rural municipalities often retain legacy mercury devices; institutions (e.g. health centers, educational labs) in urban Évora are likely to use fluorescent lighting and possibly older medical equipment. Given the overall energy legislation in Portugal, certain types of mercury-vapour lamps are still regulated via taxes (e.g. high pressure mercury lamps) under the decree-laws on lighting efficiency. Direção-Geral de Energias e Geologia These factors suggest that interventions aimed at collecting and replacing mercury-based lighting, batteries, and devices could yield non-negligible reductions.

Focus on Areas with Limited Public Awareness or Infrastructure for Hazardous Household Waste
National reports (Relatório do Estado do Ambiente) show that although Portugal has committed under PERSU 2030 to improve recycling, reuse, and selective collection rates (targeting ~60% reuse/recycling of urban waste by 2030), current rates remain far below these targets: in 2023, for example, Portugal had only achieved ~32% for preparation for reuse and recycling. Relatório do Estado do Ambiente+1 In Évora's district, the data are more striking: in 2023, of ~81,000 tonnes of domestic waste produced by the 12 municipalities under GESAMB, only **11%** was recycled. ODigital.pt Such low rates indicate both infrastructural gaps (few collection points, limited ecocentres handling hazardous fractions) and low public awareness or motivation for proper disposal. The rural municipalities around Évora often lack easy access to ecocentres or specialized collection for hazardous waste. For example, the municipality of Mora has an ecocentre and handles electronic equipment, batteries, etc., but distances and access hours remain constraints for many residents. cm-mora.pt+2cm-borba.pt+2

Focus on Areas with Existing Environmental or Health Initiatives That Could Integrate LIFE Mercury-Free Methods
There are several relevant frameworks and ongoing investments in Évora that can be leveraged. For instance, GESAMB has recently launched a **public tender of €7.5 million** to build a new automatic sorting centre for waste in Évora covering 12 municipalities. This infrastructural investment enhances the capacity for improved sorting, which is essential to isolate hazardous or mercury-containing waste streams. Notícias ao Minuto

Additionally, the network of ecocentres under GESAMB (including in Évora, Borba, Estremoz, Montemor-o-Novo, Mora, etc.) accepts various waste types including electronic waste, batteries, and other hazardous items. cm-borba.pt+1 The municipal council of Évora also operates an "Ecocentro" which accepts "monstros domésticos" (bulky domestic waste), electrical and electronic equipment, etc. Câmara Municipal de Évora

In summary, the district of Évora aligns with the key criteria for the expansion of LIFE Mercury-Free. National obligations under PERSU 2030 require Portugal to significantly increase recycling and reduce waste per capita; Évora's current recycling rate (≈11%) is far below national targets (≈60%), showing both urgency and potential. Existing infrastructure — ecocentres, plans for new sorting centres — and institutional capacity (e.g. intermunicipal waste management via GESAMB) provide a strong foundation. Targeted efforts in collection of mercury-containing products, awareness raising especially in rural areas, and integration with existing environmental and health programs are likely to produce measurable benefits. The anticipated indicators (mercury removed, citizens reached, infrastructure improved) can be grounded in or compared against baseline data from 2023 (waste volumes, recycling rates, etc.) to assess progress.

2.1.3.3 Give target regions:

- Mediterranean countries (e.g., Greece, Tunisia, Turkey)

By combining urban infrastructure with rural outreach, Évora provides a representative model for the geographic expansion of LIFE Mercury-Free in Portugal. Its mix of high mercury waste generation, infrastructure gaps, and active institutional networks creates the conditions for impactful pilot projects. Success can be measured through mercury removed from circulation, improved waste collection systems, and stronger public awareness. Lessons learned in Évora can then be scaled to other regions, supporting the broader national implementation of LIFE Mercury-Free.

2.1.4 POLAND

The LIFE Mercury-Free project has demonstrated that a structured combination of educational campaigns, stakeholder cooperation, and infrastructure development can effectively reduce mercury-related risks in urban environments. The After-LIFE strategy for Poland foresees the phased expansion of this approach to additional voivodeships and municipalities beyond the original pilot cities. The replication process will focus on adapting proven methods to regional needs, ensuring compatibility with Polish waste management regulations and the strategic priorities of the Ministry of Climate and Environment.

Priority regions for immediate replication include Eastern and South-Eastern Poland, particularly Lubelskie, Podkarpackie, and Świętokrzyskie Voivodeships, where reliance on mercury-containing products remains relatively high and awareness campaigns have been limited. These areas also serve as natural gateways for cooperation with neighboring countries such as Ukraine and Slovakia, enabling Poland to act as a bridge for replication into the Eastern Partnership region.

The mid-term goal is to extend successful models to all major metropolitan areas (Warsaw, Kraków, Wrocław, Gdańsk, and Poznań), ensuring that Poland's largest cities set

a benchmark for mercury-free practices in Central Europe. The long-term strategy foresees Poland's role as a regional hub, where experiences and methodologies are shared with partners in Romania, Bulgaria, and the Western Balkans. This geographic expansion will be coordinated under the umbrella of the Association of the Mercury-Free City Communities, ensuring cohesion and long-term sustainability.

2.1.4.1 Strategy for Geographic Expansion of LIFE Mercury-Free:

The expansion strategy will focus on building a scalable and adaptable framework for replication, drawing on lessons learned from the pilot cities. The approach combines educational campaigns, stakeholder involvement, infrastructure development, and policy advocacy. Replication will occur in phases:

- Phase 1 (0–2 years post-project): Target Eastern European regions where mercury use remains high and public awareness is limited.
- Phase 2 (2–5 years): Broader rollout across EU Member States, with outreach to non-EU neighbors.
- Phase 3 (5+ years): Expansion of the model to cover other hazardous household substances.

2.1.4.2 Identify Priority Regions

Focus on areas with:

- High use of mercury-containing products (e.g., thermometers, fluorescent lamps, batteries).

  In Poland, replication efforts must also take into account the legacy of post-industrial towns and urban manufacturing plants, which historically contributed to the widespread use of mercury-containing products. Many Polish cities, including Łódź, Katowice, and the Upper Silesia region, were once home to large textile, chemical, and heavy industry factories where mercury was commonly used in thermometers, fluorescent lighting systems, switches, and laboratory processes. In these areas, mercury-containing devices and waste often remained in storage facilities or were disposed of without proper safeguards, creating long-term environmental and health risks.

  During the political and economic transformation of the 1990s, most of these industrial facilities underwent restructuring or closure. As part of this process, decommissioning procedures were introduced to secure hazardous substances on-site. Storage rooms were sealed, equipment containing mercury was deactivated, and environmental monitoring programs were launched under the supervision of local authorities and the Chief Inspectorate of Environmental Protection (GIOŚ). Some facilities, especially in the chemical and textile sectors, were repurposed for new economic activities, but they continue to be monitored due to the possibility of residual mercury contamination in building structures or surrounding soil.

At present, existing plants operating in urban areas are subject to strict regulatory control under EU and Polish legislation, including the Waste Act and the Environmental Protection Law. Companies must obtain integrated permits (IPPC) that cover hazardous waste handling, storage, and disposal. Regular inspections by GIOŚ, regional environmental inspectorates, and municipal authorities ensure compliance with EU directives, including restrictions under the Minamata Convention on Mercury.

By replicating LIFE Mercury-Free methodologies in these post-industrial regions, Poland has the opportunity to connect community awareness campaigns with the industrial legacy of mercury use. Local residents can be directly engaged in monitoring old factory zones, while municipalities can establish additional PSZOK points near historically industrial districts. This dual approach addressing both household mercury use and industrial residues, strengthens the comprehensiveness of the After-LIFE strategy and ensures that environmental health risks are tackled across multiple sources.

- Limited public awareness or infrastructure for hazardous household waste.

  The city of Łódź provides a concrete example of how replication and expansion can directly address gaps in local waste infrastructure. Currently, the city operates three fully functional Municipal Selective Waste Collection Points (PSZOK) located at Zamiejska 1, Graniczna 2, and Kasprowicza 10. These facilities have proven to be highly effective in supporting citizens in the safe disposal of hazardous household waste, including mercury-containing products.

  To ensure equitable access across all districts, a new PSZOK facility is planned in the Bałuty district, at the intersection of Wersalska and Szparagowa streets. This will significantly improve coverage for northern Łódź, where residents currently face limited proximity to collection points. Additionally, another facility at Wersalska 39 is ready to be launched and will begin accepting waste as soon as the Municipal Waste Management Company (MPO Łódź) obtains the legally required permit for waste collection at this location. The delay is linked to regulatory procedures, but local authorities are committed to resolving these issues promptly.

  The establishment of these new collection points illustrates how replication of LIFE Mercury-Free methodologies can be integrated into existing municipal waste systems. By expanding PSZOK coverage, Łódź ensures that all residents can contribute to mercury-free practices and the broader goals of circular economy and environmental health. This case will serve as a model for other Polish and European cities facing similar infrastructure challenges.

- Existing environmental or health initiatives that could integrate LIFE Mercury-Free methods.

In Poland, several environmental and health initiatives already provide a strong foundation for integrating LIFE Mercury-Free methodologies. At the national level, programs coordinated by the Ministry of Climate and Environment and the Chief Inspectorate of Environmental Protection (GIOŚ) focus on hazardous waste management, air quality monitoring, and public health protection. These initiatives include nationwide educational campaigns on waste segregation, efforts to eliminate persistent organic pollutants, and compliance measures related to the Minamata Convention on Mercury. LIFE Mercury-Free can complement these frameworks by offering practical methodologies for public engagement and by providing localized toolkits that strengthen awareness at the municipal level.

The city of Łódź represents a particularly relevant case, as it is actively implementing a range of environmental and health policies that can be enhanced by LIFE Mercury-Free methods. The municipal program “Ekoprogram Łódź”, together with selective waste collection systems (PSZOKs), already encourages residents to adopt more sustainable waste practices. The planned expansion of PSZOK facilities in Łódź provides an excellent opportunity to integrate specific guidelines for mercury-containing waste, making hazardous waste management more accessible to the public. Furthermore, local health initiatives, such as city-supported preventive healthcare campaigns addressing air pollution and occupational health, could incorporate mercury-related risks, highlighting the connections between environmental exposure and public well-being.

Łódź also hosts a vibrant academic and NGO ecosystem that can be mobilized for integration. Institutions such as Politechnika Łódzka and the Medical University of Łódź are engaged in research on toxicology, environmental engineering, and public health. These universities can serve as scientific partners for expanding mercury-free education, developing curricula, and conducting monitoring studies. NGOs and grassroots initiatives, including local ecological clubs and urban health associations, are already involved in awareness campaigns on recycling, energy efficiency, and climate change. By embedding mercury-related awareness and behavioral change activities into these existing campaigns, the city can amplify outreach without duplicating structures.

In this way, integrating LIFE Mercury-Free methods into existing environmental and health initiatives in Łódź will create synergies between municipal services, academia, NGOs, and healthcare institutions. This integration not only increases efficiency but also ensures long-term sustainability by embedding mercury-free practices into the broader environmental and health agenda of the city.

Priority will be given to regions with:

- High prevalence of mercury-containing products (thermometers, fluorescent lamps, button batteries, dental amalgam).

- Limited collection infrastructure or lack of dedicated disposal channels for hazardous household waste.
- Ongoing environmental or health initiatives that can integrate LIFE Mercury-Free methods.

2.1.4.3 Give target regions:

- Priority is Łódź Voivodeship and Lesser Poland Voivodeship

2.1.5 UKRAINE

2.1.5.1 Strategy for Geographic Expansion of LIFE Mercury-Free:

Ukraine provides a unique opportunity to expand the LIFE Mercury-Free model due to the high prevalence of mercury-containing products in households, low awareness levels among the general population, and the pressing need to align national environmental practices with EU standards and the Minamata Convention. Pilot actions in Lviv and Ivano-Frankivsk have demonstrated the feasibility of awareness campaigns, local stakeholder engagement, and infrastructure development for safe disposal of mercury-containing waste. The potential for attracting new territories is very large because Ukraine is the second largest country in Europe, and the project has attracted only two regional centres out of 24 (of which 2 are under Russian occupation). At the same time, it is appropriate to extend the experience to neighbouring cities with project participant cities and large industrial centres with higher levels of hazardous waste emissions.

2.1.5.2 Identify Priority Regions

Focus on areas with:

- Cities in Western Ukraine with strong cross-border cooperation and municipal environmental programs (Lviv, Ivano-Frankivsk, Ternopil, Chernivtsi, Uzhhorod, Lutsk).
- Regional centres with established waste infrastructure and potential for replication (Kyiv, Dnipro).
- Small and medium-sized municipalities (territorial communities) with active NGOs and community initiatives.

2.1.5.3 Give target regions:

- Western Ukraine (Lviv, Ivano-Frankivsk, Ternopil).
- Expansion potential to central regions and the whole territory of Ukraine.

2.2 Build Local Partnerships

Establish collaborations with:

- Municipal governments and waste management authorities
- Environmental NGOs and community groups
- Schools, universities, and healthcare institutions

Actions:

- Sign Memoranda of Understanding (MoUs) for joint implementation
- Co-create localized educational materials and campaigns
- Train local stakeholders using LIFE Mercury-Free toolkits

2.2.1 ITALY

Effective replication depends on building trust-based partnerships across government, academia, civil society, and the private sector. UNICAM will act as a bridge between scientific expertise and local communities, ensuring that the project's technical outputs are translated into practical solutions and adopted by everyday citizens. Partnerships will also support policy uptake, ensuring municipalities and regions embed LIFE Mercury-Free recommendations into local legislation and operational frameworks.

Key collaborations:

- **Municipal governments and waste authorities**: City of Camerino and Macerata waste consortia will co-develop infrastructure and outreach actions.
- **Environmental NGOs and community groups**: Partnerships with Legambiente Marche will provide local volunteer capacity, visibility, and access to community networks.
- **Schools, universities, and healthcare institutions**: School networks in Marche and Umbria will integrate awareness campaigns into curricula. Hospitals and local health services will disseminate safe disposal practices among patients.

Planned actions:

- **Memoranda of Understanding (MoUs):** Formal agreements with municipalities and NGOs to co-finance or co-manage awareness and infrastructure actions.
- **Localized educational materials:** Development of Italian-language guides for schools and households, adapted to local waste management structures and cultural communication preferences.
- **Capacity building workshops:** Training for teachers, waste operators, and municipal staff to embed LIFE toolkits into daily work.
- **Integration with health campaigns:** Collaboration with hospitals and pharmacies to provide citizens with safe-disposal information during medical consultations.

2.2.2 GREECE

A core component of the LIFE MERCURY FREE expansion strategy is the establishment of strong local partnerships that ensure ownership, long-term sustainability, and effective implementation of project actions. By working with diverse local actors, the project

strengthens community engagement, facilitates knowledge transfer, and integrates mercury-free practices into existing structures.
Key collaborators include:

- Municipal governments and waste management authorities, who play a central role in improving collection systems and shaping local policy.
- Environmental NGOs and community groups, which serve as multipliers of awareness and mobilize citizens at the grassroots level.
- Schools, universities, and healthcare institutions, which act as hubs for education, research, and public health advocacy, ensuring intergenerational knowledge transfer.

Planned actions for partnership building:

- Sign Memoranda of Understanding (MoUs) with municipalities, institutions, and NGOs to formalize cooperation and clarify roles in the joint implementation of project activities.
- Co-create localized educational materials and campaigns tailored to cultural, linguistic, and regional needs, ensuring relevance and inclusivity.
- Train local stakeholders (municipal staff, educators, healthcare workers, and community leaders) using LIFE MERCURY FREE toolkits, enabling them to replicate best practices and integrate project methodologies into daily operations.

2.2.3 PORTUGAL

Priority partners: Schools and the intermunicipal waste authority (e.g., GESAMB). Schools will work as a partner of information dissemination among younger generations. These entities should assume roles of logistical coordination (collection points, safe transportation, referral for treatment), institutional support (authorization of actions, public communication), and integration with Municipal Waste Management Plans. Collaboration with local authorities ensures operational sustainability and facilitates the incorporation of LIFE Mercury-Free activities into existing infrastructure (ecocenters, periodic collection campaigns).

Schools and universities

The partnership with the University of Évora and schools (primary and secondary education) allows for simultaneous research, training, and mass-reach campaigns. Universities provide technical capacity (monitoring, impact assessments) and human resources (students and faculty) to implement and evaluate pilots. Schools act as dissemination and targeted collection points.

Recommended roles

- University of Évora: research and monitoring, impact assessment, advanced technical training, support for the design of educational tools.
- Schools: incorporation of curricular modules, organization of school collections, family involvement.

2.2.4 POLAND

The replication of LIFE Mercury-Free in Poland depends on the formation of strong partnerships at the local level. Municipal governments and waste management authorities will be central actors, as they are responsible for implementing EU directives at the gmina and powiat levels. Cooperation agreements (MoUs) will be negotiated with selected municipalities to establish mercury-free roadmaps, integrate hazardous waste collection into municipal services, and formalize responsibilities for infrastructure funding.

Environmental NGOs, such as Polski Klub Ekologiczny and regional associations, will be invited to co-design localized awareness campaigns. Their grassroots experience and trusted position among citizens will ensure effective communication and monitoring of initiatives. Universities (e.g., Politechnika Łódzka, AGH) and healthcare institutions will be engaged to introduce targeted educational modules on mercury-free lifestyles and safe waste management. Special emphasis will be placed on training healthcare professionals to inform patients about risks related to mercury and safe alternatives.

Partnership-building will follow the Quadruple Helix model introduced in Deliverable 2.3, ensuring that business actors are not overlooked. Producers and retailers will be engaged to promote mercury-free alternatives and sponsor local campaigns. Through these partnerships, Poland will ensure that replication efforts are not isolated but integrated into broader sustainable development strategies at the local and regional levels.

Actions:

- Municipal Governments & Waste Management Authorities
  - Negotiate Memoranda of Understanding (MoUs) for cooperation.
  - Provide policy templates for safe disposal, aligning with EU Waste Framework Directive and Minamata Convention.
  - Set up local advisory committees using the Quadruple Helix model, ensuring participation of authorities, business, academia, and civil society.
- Environmental NGOs & Community Groups
  - Co-design localized awareness campaigns using LIFE Mercury-Free toolkits.
  - Engage NGOs in monitoring and evaluation of collection points and educational programs.
  - Include NGOs in the governance of the future Association of Mercury-Free City Communities.
- Schools, Universities & Healthcare Institutions
  - Implement curriculum modules on hazardous waste (developed in WP4).
  - Organize student innovation challenges to propose mercury-free alternatives.
  - Train healthcare professionals to raise patient awareness on the risks of mercury and alternatives.

2.2.5 UKRAINE

In Ukraine, local partnerships were successfully developed and will serve as the foundation for further replication. Collaborations include:

- **Municipal authorities**: Lviv City Council (Departments of Ecology, Waste Management, Civil Protection), Ivano-Frankivsk City Council (Departments of Ecology, Waste Management, Civil Protection)
- **Regional state authorities**: Department of Ecology and Natural Resources of Lviv Regional State Administration, State Environmental Inspectorate in the Lviv region.
- **Healthcare and safety institutions**: Urosvit Clinic, State Institution "Lviv Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine", Main Department of the State Emergency Service of Ukraine in the Lviv Region, Educational and Methodological Center of Civil Protection and Life Safety of the Lviv Region, St.Luca Clinic
- **NGOs and community groups**: Zero Waste Lviv, “Batteries, Surrender!”, ECO Cluster, Ecological Bureau of Ukrainian Greek Catholic Church, Frankivsk Half Marathon, environmental clubs, and grassroots initiatives.
- **Academic institutions**: Lviv Polytechnic National University, Ivano-Frankivsk Academy Ivana Zolotoustoho, and local schools, which integrated awareness activities.
- **Waste operators**: “Bodnarivka” – a subsidiary of the Lviv municipal company “Green Lviv”.

Planned actions: signing MoUs, joint development of educational campaigns, and stakeholder training using LIFE Mercury-Free materials.

2.3 Launch Awareness Campaigns based on MLE exercises

Replicate proven outreach formats:

- Public workshops and school programs
- Social media campaigns tailored to local languages and cultural norms
- “Mercury-Free Home” challenges with incentives for participation

Enhancements:

- Use local influencers or community leaders to amplify messaging
- Translate and adapt visual materials to reflect regional aesthetics

2.3.1 ITALY

Awareness-raising is at the core of the LIFE Mercury-Free approach. Italian campaigns will be designed to shift individual behavior through education and incentives, but also to mobilize entire communities around the concept of a “Mercury-Free Home” and later, a “Hazard-Free Household.” Drawing on insights from the project’s Mutual Learning

Exercises (MLE), UNICAM will customize outreach to fit Italian cultural habits, ensuring maximum relevance and engagement.

Replicated outreach formats:

- **Workshops and school programs:** Interactive activities for children and teenagers in Camerino and neighboring towns, showing the dangers of mercury and practical disposal options.
- **Social media campaigns:** Use of Facebook, Instagram, and TikTok (very popular among Italian youth) to spread messages in Italian, using regional dialect variations when relevant for local resonance.
- **"Mercury-Free Home Challenge":** A public contest rewarding households that demonstrate best practices in safe disposal, monitored via apps and photo submissions.

Enhancements for Italy:

- **Local leaders as champions:** Teachers, mayors, and popular cultural figures in Marche will be engaged to lend credibility and amplify reach.
- **Adaptation of materials:** Flyers, videos, and infographics will be redesigned with Italian cultural symbols and aesthetics to increase relatability.
- **Media partnerships:** Collaboration with regional TV and radio to extend the campaign beyond digital platforms.
- **Gamification for children:** Educational games, quizzes, and competitions in schools to reinforce learning in an enjoyable way.

2.3.2 GREECE

Building on the outcomes of the Mutual Learning Exercises (MLEs) conducted within LIFE MERCURY FREE, awareness campaigns will be designed and launched to replicate proven outreach formats and ensure effective public engagement. These campaigns will serve as a bridge between technical project outcomes and the daily lives of citizens, making mercury-free practices accessible, practical, and relevant.

Replicated outreach formats will include:

- Public workshops and school programs, fostering interactive learning and hands-on demonstrations on the risks of mercury and safe alternatives.
- Social media campaigns tailored to local languages, traditions, and cultural norms, reaching a wide audience and engaging younger generations in particular.
- "Mercury-Free Home" challenges, where households commit to identifying and replacing mercury-containing products, with incentives and recognition for participation.

Enhancements based on MLE insights:

- Involve local influencers or community leaders to amplify key messages and build trust with diverse audiences.

- Translate and adapt visual materials so that campaign designs reflect regional aesthetics and resonate with cultural identity, increasing relatability and impact

2.3.3 PORTUGAL

Public workshops and school programs

School programs: Partnering with the University of Évora and secondary schools, the campaign will embed mercury-free education into science and environmental curricula. Interactive methods will include classroom experiments (simulations of contamination pathways), theatre-based learning, and student-led poster exhibitions. Schools will also function as focal collection points, transforming educational activities into measurable environmental outcomes.

Evaluation loop: Data from participant surveys, teacher feedback, and collection volumes during school campaigns will be fed into the MLE cycle, ensuring alignment between campaign design and observed community behaviours.

Social media campaigns tailored to local languages and cultural norms

Digital outreach complements physical workshops by ensuring broad reach and cost-effective engagement. Campaigns will be conducted in Portuguese, using regionally resonant expressions and imagery.

- **Channels**: Facebook (targeting older generations) and Instagram (youth audiences)
- **Behavioural framing**: Messages will focus on intergenerational responsibility, and collective action narratives.
- **MLE integration**: Engagement analytics (likes, shares, comments), coupled with periodic online polls, will serve as feedback loops to adapt message framing and identify under-reached demographics.

Integration of MLE Principles

All awareness campaign formats will integrate MLE exercises to ensure adaptability, accountability, and long-term effectiveness:

1. **Monitoring**: Collection of quantitative indicators (attendance, engagement metrics, number of items collected).
2. **Learning**: Continuous adaptation of content and delivery methods based on participant feedback, stakeholder debriefings, and comparative analysis across different outreach formats.
3. **Evaluation**: Periodic assessment of overall campaign effectiveness, with benchmarks such as percentage increase in public awareness (survey-based), number of mercury-containing products safely removed, and geographic expansion of engaged communities.

Risk Mitigation & Sustainability

- **Risks**: Potential campaign fatigue, digital exclusion among rural elderly populations, and logistical limitations in verifying household-level participation.

- **Mitigation**: Diversify communication channels (digital + face-to-face), employ intergenerational approaches (youth teaching elders), and simplify reporting requirements for participants.
- **Sustainability**: Institutionalize school programs in annual curricula.

Expected Outcomes & Indicators

- **Awareness outcomes**:
  - ≥ 100 students engaged in school programs within first year.
- **Engagement outcomes**:
  - ≥ 5000 impressions across social media channels in 12 months.
- **Environmental outcomes**:
  - ≥ 50 kg of mercury-containing products safely collected during campaign-linked activities in Year 1.
  - Establishment of at least 3 permanent collection points promoted via campaigns.

2.3.4 POLAND

Mutual Learning Exercises (MLE) piloted during the project will serve as the backbone of After-LIFE awareness campaigns in Poland. Localized workshops will be organized in schools, universities, and community centers, providing hands-on training in the identification, safe handling, and substitution of mercury-containing products. These workshops will draw directly on the materials developed within LIFE Mercury-Free, supplemented with locally relevant examples such as energy-efficient lighting alternatives or mercury-free medical devices.

Social media will play a critical role, with campaigns tailored for Polish-speaking audiences. Dedicated accounts on Facebook, Instagram, and TikTok will disseminate visual content adapted to Polish cultural aesthetics. A strong focus will be placed on engaging local influencers, community leaders, and teachers, who will act as ambassadors of the “Mercury-Free Home” challenge. This challenge will gamify behavior change by rewarding households and schools that demonstrate measurable reductions in mercury use.

The campaigns will also include interactive public events such as flash mobs, eco-marathons, and family workshops, building on methods tested in Deliverable 2.3. By combining traditional and digital outreach formats, the campaigns will ensure both wide reach and deep engagement, strengthening citizens’ role as active contributors to the mercury-free transition.

Actions:

- Replicate Mutual Learning Exercise (MLE) formats, focusing on peer-to-peer exchange and capacity building.

- Public Workshops & School Programs: Practical sessions on identification, safe handling, and substitution of mercury-containing products.
- Social Media Campaigns: Create country-specific Facebook/Instagram/TikTok pages; adapt visual style and language to local culture.
- Mercury-Free Home Challenges: Gamify behavior change with badges, recognition, or prizes for households reducing mercury use.

Enhancements:

- Recruit local influencers, journalists, and eco-activists to amplify campaigns.
- Adapt communication materials for regional languages and aesthetics, including Eastern European and post-Soviet design norms.
- Organize flash mobs, marathons, and workshops (from Deliverable 2.3 toolkit) as interactive engagement methods.

2.3.5 UKRAINE

In Lviv and Ivano-Frankivsk the project teams implemented multi-level campaigns, including:

- Public workshops and seminars on mercury risks and safe disposal.
- Distribution of posters and leaflets in clinics, libraries, schools, and administrative buildings.
- Interactive events at universities to engage young audiences.
- Local media and NGO platforms used to amplify messaging.
- Marathons of mercury-free cities
- Future campaigns across Ukraine will rely on visual storytelling adapted to cultural contexts and include “Mercury-Free Home” challenges to motivate households.

2.4 Infrastructure & Policy Support

Support local authorities in:

- Setting up collection points for mercury-containing products
- Developing safe disposal and recycling protocols
- Advocating for bans or restrictions on mercury in consumer goods

Policy tools:

- Templates for municipal ordinances
- Cost-benefit analyses for mercury-free alternatives
- Guidance for aligning with EU and Minamata Convention standards

2.4.1 ITALY

Awareness campaigns alone are not enough unless citizens have access to infrastructure for safe disposal and municipalities enforce supportive policies. UNICAM

will focus on linking behavior change to structural enablers, making it convenient and cost-effective for citizens to act in a sustainable way. Policy guidance will ensure alignment with EU standards, while municipal ordinances will make the changes binding at the local level.

Support actions for municipalities:

- **New collection points:** Establishment of dedicated bins for thermometers, batteries, and lamps in schools, pharmacies, and municipal centers.
- **Safe disposal protocols:** Training for municipal waste staff and private operators on handling hazardous fractions of household waste.
- **Pilot recycling initiatives:** Collaboration with regional recycling consortia to demonstrate mercury-free alternatives in practice.

Policy tools and guidance:

- **Template ordinances:** Draft municipal regulations that can be easily adopted by different Italian towns.
- **Economic analyses:** Studies showing that preventing mercury contamination reduces long-term municipal clean-up costs, making mercury-free policies economically attractive.
- **Legal guidance:** Practical advice to municipalities for compliance with Italian Decree 152/2006, EU Waste Framework Directive, and Minamata Convention obligations.

2.4.2 GREECE

A crucial element of the LIFE MERCURY FREE expansion strategy is to provide both infrastructure and policy support that will enable local authorities to adopt and sustain mercury-free practices. By combining technical guidance with concrete policy tools, the project ensures that municipalities and regulators are equipped to manage mercury-containing products effectively while also aligning their efforts with European and international standards.

On the infrastructure side, the project supports municipalities in setting up collection points for mercury-containing products such as thermometers, fluorescent lamps, and batteries. These accessible community collection systems are complemented by the development of safe disposal and recycling protocols that minimize risks to both human health and the environment. In parallel, LIFE MERCURY FREE also works with local authorities to advocate for bans or restrictions on the sale and use of mercury in consumer goods, reinforcing a transition toward safer alternatives. Policy support is equally important in ensuring the sustainability of these actions. To this end, the project provides municipalities with templates for ordinances, making it easier for local governments to establish clear rules and responsibilities. Cost–benefit analyses are also prepared to demonstrate the economic, environmental, and health advantages of adopting mercury-free alternatives, giving decision-makers a strong evidence base for action.

Finally, detailed guidance is offered to help align municipal and regional strategies with the EU Mercury Regulation and the Minamata Convention on Mercury, ensuring compliance while promoting best practices.
Through this combination of infrastructure development and policy support, LIFE MERCURY FREE moves beyond awareness-raising to establish a systemic framework for mercury-free living. This dual approach strengthens institutional capacity, facilitates behavioral change, and guarantees that the positive impacts of the project can be sustained in the long term.

2.4.3 PORTUGAL

Setting up collection points for mercury-containing products

One of the most pressing infrastructural needs in the Évora district is the establishment of easily accessible collection points specifically dedicated to mercury-containing products. Although ecocentres exist under GESAMB and municipal councils, their coverage is uneven, and rural populations face barriers of distance, transport, and awareness. The LIFE Mercury-Free project can provide technical and financial guidance for the creation of **satellite collection stations** in University of Évora poles, including Herdade da Mitra (a rural located pole).

Such decentralised nodes reduce accessibility barriers, integrate with existing waste flows, and enable continuous monitoring of collection rates. The project will also support the design of **standardized labelling, packaging, and transfer procedures** to ensure compliance with hazardous waste handling requirements.

Guidance for aligning with EU and Minamata Convention standards

Portugal is a signatory to the **Minamata Convention on Mercury** and subject to the EU's mercury regulation frameworks. LIFE Mercury-Free will ensure that local policies in Évora are not only compliant but also serve as **best-practice examples** of subnational alignment. Guidance documents will map:

- How municipal actions contribute to Portugal's national commitments.
- Steps required for reporting compliance under EU and international monitoring systems.
- Recommendations for integrating local monitoring data (collection volumes, disposal safety indicators) into national reporting structures.

Integration with Évora's Local Context

The Évora region presents both challenges (low recycling rates, limited hazardous waste infrastructure, rural dispersion) and opportunities (upcoming investment in new sorting centres, engaged university, municipal openness to environmental innovation). By embedding infrastructure and policy support within this context, LIFE Mercury-Free can create a replicable model for other Portuguese regions.

2.4.4 POLAND

One of the key priorities after the project's completion will be to establish and maintain mercury waste collection points in Polish cities and municipalities. During the LIFE

Mercury-Free project, such points were co-funded by local communities; after the project, funding will be fully secured through municipal budgets and public-private partnerships. Local authorities will receive standardized protocols for the collection, transport, and recycling of mercury-containing waste, ensuring compliance with EU and Polish regulations.

Policy support will focus on helping municipalities adopt local ordinances that restrict mercury use and encourage alternatives. Model documents, developed within the project, will be offered as templates for adaptation by municipal councils. Cost-benefit analyses of mercury-free solutions (e.g., LED lighting, digital thermometers) will be presented to decision-makers, demonstrating long-term savings and health benefits.

At the national level, project partners will liaise with the Ministry of Climate and Environment and the Chief Inspectorate of Environmental Protection (GIOŚ) to ensure alignment with national waste management policies and Minamata Convention obligations. In this way, Polish cities will not only implement local solutions but also contribute to national and EU-wide policy harmonization.

Actions:

- Support municipalities in establishing and maintaining collection points for mercury waste in public buildings, schools, and pharmacies.
- Develop standard operating procedures for safe transport, recycling, and disposal of mercury products.
- Create policy advocacy packages:
    - Templates for municipal ordinances banning mercury-containing consumer goods.
    - Cost-benefit analyses demonstrating savings from mercury-free alternatives.
    - Guidance for aligning municipal actions with EU standards and the Minamata Convention.
- Promote integration of mercury-free policies into urban sustainability strategies, linking with broader Green Deal objectives.

2.4.5 UKRAINE

In Lviv, cooperation with Bodnarivka led to the promotion of safe disposal pathways. Collection points for mercury waste were supported by the local municipality and will remain financed after the project. In Ivano-Frankivsk, the collection and disposal of mercury-containing waste is funded by the city budget. In the context of martial law and significant cuts in state and local budgets, project partners managed to defend the preservation of this funding.

2.5 Monitor & Evaluate Progress

Implement a feedback loop:

- Baseline and follow-up surveys on public awareness and behavior
- Waste audits to measure reduction in mercury-containing items
- Annual reports to share lessons learned and best practices

Digital tools:

- Use mobile apps or online dashboards to track engagement
- Create a regional map of mercury-free certified zones

2.5.1 ITALY

Replication success must be tracked with measurable indicators. UNICAM will establish a continuous monitoring and evaluation (M&E) loop, ensuring that actions remain effective and adaptable to new contexts. M&E will not only measure progress but also serve as an accountability mechanism to stakeholders and citizens, reinforcing trust and long-term commitment.

Monitoring methods:

- **Baseline and follow-up surveys:** Collect data from households before and after awareness campaigns to measure changes in knowledge and disposal practices.
- **Waste audits:** Assess volumes of mercury-containing items collected in Camerino and other municipalities to quantify impact.
- **Case studies:** Document good practices and challenges to inform replication in other Italian regions.

Digital and participatory tools:

- **Mobile app integration:** Citizens will log their participation in challenges and report disposal habits through an app connected to the LIFE e-HUB.
- **Interactive mapping:** An online dashboard will highlight municipalities that achieve “Mercury-Free” certification, serving as both recognition and peer motivation.
- **Annual reports:** UNICAM will produce open-access Italian and English reports summarizing lessons learned, outcomes achieved, and recommendations for scaling up.

2.5.2 GREECE

Monitoring and evaluation are central to ensuring that LIFE MERCURY FREE achieves lasting results and provides a model that can be replicated in other regions. A structured feedback loop will be established to measure progress, assess impact, and refine actions over time. This begins with the implementation of baseline surveys to capture existing levels of public awareness and behavior regarding mercury use, followed by follow-up surveys to identify changes resulting from project interventions. In parallel, waste audits

will be conducted to measure the reduction in mercury-containing items in household and municipal waste streams, offering a tangible indicator of behavioral change. The findings from these activities will be consolidated into annual reports, which will not only evaluate the effectiveness of project activities but also highlight lessons learned and best practices for wider dissemination. Digital tools will play an important role in strengthening the monitoring framework and improving transparency. Mobile applications and online dashboards will be used to track citizen engagement, providing real-time insights into participation in campaigns, school programs, and community initiatives. In addition, a regional map of mercury-free certified zones will be developed, enabling stakeholders to visualize progress and celebrate areas that have successfully transitioned away from mercury use. By combining traditional evaluation methods with digital innovation, LIFE MERCURY FREE ensures that monitoring is both rigorous and participatory. This dual approach allows stakeholders at all levels—citizens, municipalities, and policymakers—to see the results of their efforts, reinforcing trust, accountability, and motivation for further action.

2.5.3 PORTUGAL

Monitoring begins with the establishment of a **baseline dataset** that captures current levels of knowledge, attitudes, and practices among households, schools, and institutions in Évora regarding mercury-containing products. Surveys will employ stratified sampling to ensure representation of both urban and rural municipalities. Indicators will measure:

- Recognition of mercury-containing products.
- Disposal habits and access to collection points.
- Perceived risks to health and environment.

Follow-up surveys will quantify behavioural shifts and enable statistical analysis of campaign effectiveness. Integration of demographic variables (age, education, rural vs. urban residency) will further identify population segments requiring targeted interventions.

Integration with MLE Framework

The entire monitoring system is anchored in a **Monitoring, Learning, and Evaluation (MLE) framework**, ensuring that data is not only collected but systematically analysed and acted upon.

- **Monitoring**: Continuous measurement of awareness levels, waste flows, and engagement indicators.
- **Learning**: Adaptive redesign of campaigns based on evidence, ensuring iterative improvement.
- **Evaluation**: Transparent reporting of successes, limitations, and replicable models, contributing to Portugal's compliance with EU directives and the Minamata Convention.

2.5.4 POLAND

The After-LIFE Plan emphasizes systematic monitoring of progress in Poland. Each participating municipality will be required to conduct baseline surveys on public awareness and behavior regarding mercury-containing waste. Follow-up surveys will be repeated annually to measure the effectiveness of interventions. In parallel, waste audits at collection points will track the volume and type of mercury waste diverted from general streams.

Annual reports will be compiled by the Association, consolidating data from Polish cities and comparing results with other European partners. These reports will highlight best practices, identify areas requiring improvement, and guide resource allocation. For citizens, transparency will be maintained through publicly accessible dashboards hosted on the LIFE e-HUB.

Digital monitoring will include the development of a data base allowing households to log their participation in campaigns and locate nearby collection points. Additionally, a regional map of mercury-free certified municipalities will be maintained, visually demonstrating the expansion of the initiative across Poland and beyond.

Actions:

- Conduct baseline and follow-up surveys to track changes in public awareness, knowledge, and behaviors.
- Implement waste audits at collection points to quantify mercury reduction.
- Develop annual performance reports shared with the Association and EU institutions.

Digital Tools:

- Create a mobile app and online dashboard for citizen engagement (reporting mercury-free actions, locating collection points).
- Develop a regional map of mercury-free certified zones, tracking replication across cities.

2.5.5 UKRAINE

Baseline surveys in Lviv revealed low practical knowledge about mercury among citizens. Follow-up surveys will measure improvement.
Waste audits at municipal collection points will track amounts of mercury-containing waste collected.
Digital dashboards integrated into the LIFE e-HUB will be used to share results with stakeholders.
Annual bilingual (Ukrainian/English) reports will document progress and lessons learned.

2.6 Scale Through Regional Networks

Create a **Mercury-Free Cities Network** to:

- Share resources and success stories
- Host annual summits or webinars
- Encourage peer-to-peer mentoring between cities
- **Adapt** methodologies to address other hazardous household substances (e.g., lead, cadmium, PFAS, microplastics).
- **Sustain** awareness, behavior change, and policy influence beyond the project's official duration.

2.6.1 ITALY

Scaling the LIFE Mercury-Free model beyond Camerino requires the creation of structured networks that allow municipalities to learn from one another, exchange solutions, and jointly advocate for policy changes. UNICAM will lead the establishment of a Mercury-Free Cities Network – Italy, ensuring continuity and momentum beyond the LIFE project. This network will serve as a platform for capacity building, collective learning, and expansion to other hazardous substances.

Key activities:

- **Resource and knowledge sharing:** Create an online repository hosted on the LIFE e-HUB (in Italian and English) where municipalities can access guides, training materials, and templates for ordinances.
- **Annual summits and webinars:** Host yearly conferences in Camerino (starting in M36) where Italian municipalities can present progress, challenges, and success stories.
- **Peer-to-peer mentoring:** Pair smaller towns with more advanced municipalities (e.g., Camerino mentoring Macerata, Ancona mentoring smaller coastal towns) to ensure practical knowledge transfer.
- **Expansion to other substances:** Use the network to broaden focus beyond mercury to lead, cadmium, PFAS, and microplastics, applying the same behavior-change and infrastructure-support approach.
- **National-level advocacy:** Engage the network as a collective voice for policy improvements, including lobbying for better enforcement of Italy's EPR (Extended Producer Responsibility) schemes.

2.6.2 GREECE

To maximize the long-term impact of LIFE MERCURY FREE in Greece, the project will scale its results through the establishment of a Mercury-Free Cities Network. This network will create a collaborative platform for Greek municipalities to exchange resources, share success stories, and build upon each other's experiences. By organizing annual summits and thematic webinars, the network will provide opportunities for dialogue between local authorities, environmental experts, universities, and community leaders. At the same

time, peer-to-peer mentoring will enable municipalities that have already piloted mercury-free practices, such as Larissa, to support other cities in adopting similar measures.
The Greek Mercury-Free Cities Network will also serve as a flexible framework for addressing additional environmental risks beyond mercury. The methodologies and toolkits developed through LIFE MERCURY FREE can be adapted to cover other hazardous household substances such as lead, cadmium, PFAS, and microplastics. This adaptability ensures that the network contributes to broader national and EU priorities in chemical safety, circular economy, and public health protection.
Crucially, the network will sustain awareness, encourage behavioral change, and strengthen policy influence even after the official end of the project. By embedding collaboration into a long-term structure, the Mercury-Free Cities Network in Greece will guarantee that the lessons learned during LIFE MERCURY FREE evolve into a durable movement, creating systemic change across municipalities and ensuring that mercury-free practices become an integral part of local environmental governance.

2.6.3 PORTUGAL

The network will function as a **knowledge-sharing hub**, enabling participating cities to exchange educational materials, technical guidelines, and citizen engagement strategies. Évora's pilot campaigns (like school programs) will serve as **first case studies**. Dissemination mechanisms will include an open-access digital repository of campaign materials and a multilingual resource library (e-Hub) to ensure adaptability across cultural and linguistic contexts. Also, annual summits and webinars will be organized.

Sustain Awareness, Behaviour Change, and Policy Influence

The long-term legacy of LIFE Mercury-Free depends on institutionalising practices beyond the project's formal funding horizon. To this end, the Mercury-Free Cities Network will:

- Institutionalise awareness campaigns into **annual school curricula** and municipal environmental calendars.
- Secure co-funding mechanisms from regional development funds and EU structural programmes, reducing dependency on LIFE funding.

The combination of networking, methodological transfer, and institutional embedding ensures that Évora's role as a pilot evolves into a **replicable governance model**, extending LIFE Mercury-Free's impact well beyond its official timeframe.

2.6.4 POLAND

Scaling the LIFE Mercury-Free model will be achieved through the formal establishment of the Mercury-Free Cities Network, coordinated by the planned NGO Association. Polish cities will play a leading role, hosting networking events and acting as mentors for new replicator cities in Central and Eastern Europe.

The Network will organize annual summits and webinars, with rotating venues across Poland and partner countries. These events will provide opportunities for city representatives, NGOs, and businesses to share resources, success stories, and challenges.

Peer-to-peer mentoring programs will be created, pairing experienced cities such as Łódź with emerging replicator cities in Poland and abroad.

The LIFE e-HUB platform will serve as the digital backbone of the network, hosting toolkits, case studies, and multilingual resources. This collaborative infrastructure will ensure that the Polish experience is continuously shared and that replication is accelerated across borders.

Actions:

- Formalize the Mercury-Free Cities Network under the NGO Association.
- Organize annual summits, webinars, and networking events, rotating among member cities.
- Provide peer-to-peer mentoring, pairing advanced pilot cities with replicator cities.
- Establish a knowledge hub within LIFE e-HUB for storing toolkits, case studies, and policy guidelines.

2.6.5 UKRAINE

Actions:

- Dissemination of best practices for dealing with mercury-containing waste
- Support of local environmental initiatives
- Joint events and simultaneous events in partner cities

2.7 Extension to Other Hazardous Substances

Substances to Target:

Substance	Common Household Sources	Health/Environmental Risks
Lead	Paint, pipes, toys	Neurotoxicity, developmental delay
Cadmium	Batteries, plastics	Kidney damage, carcinogenic
PFAS	Non-stick cookware, textiles	Hormonal disruption, bioaccumulation
Microplastics	Cleaning products, synthetic fabrics	Marine pollution, ingestion risks

Approach:

- Apply the same behavioral change model used for mercury (awareness + infrastructure + incentives).
- Develop disposal and substitution guides for each substance.
- Promote safer alternatives through consumer education campaigns.

2.7.1 ITALY

While mercury is the immediate focus, Italian households face risks from other hazardous substances that are equally harmful and often poorly managed. UNICAM will apply the "awareness + infrastructure + incentives" model from LIFE Mercury-Free to address additional pollutants. By doing so, the project's legacy will be broadened, making it a cornerstone for sustainable household hazardous waste management in Italy.

Substances to Target (Italy):

- **Lead** – Present in old paints, water pipes, and imported toys. Risk: neurotoxicity and developmental issues in children.
- **Cadmium** – Found in rechargeable batteries and some plastics. Risk: kidney damage and carcinogenic potential.
- **PFAS (per- and polyfluoroalkyl substances)** – Widespread in non-stick cookware and treated textiles. Risk: hormonal disruption and bioaccumulation.
- **Microplastics** – Common in synthetic fabrics, cleaning products, and cosmetics. Risk: ingestion and marine ecosystem contamination.

Approach in Italy:

- **Awareness campaigns:** Expand public education to include safe alternatives (e.g., lead-free paints, PFAS-free cookware, biodegradable cleaning products).
- **Disposal guides:** Develop Italian-language guides for citizens on how to safely dispose of batteries, plastics, and textiles containing PFAS.
- **Infrastructure expansion:** Advocate for municipal hazardous waste centers to broaden their collection capacity to cover lead, cadmium, and PFAS products.
- **Consumer campaigns:** Collaborate with Italian retailers to introduce eco-labels and promote safer product choices.
- **Pilot programs:** Launch a "Hazard-Free Household" pilot in Camerino, integrating all four substances into a comprehensive behavior-change campaign.

2.7.2 GREECE

Greece will extend its efforts to address other hazardous substances:

- Fluorescent lamps (including compact fluorescent lamps – CFLs)
- High-intensity discharge (HID) lamps
- Mercury vapor lamps
- Switches and relays
- Some thermostats
- Certain sensors
- Dental amalgam fillings (contain elemental mercury)

2.7.3 PORTUGAL

While mercury constitutes the initial focus, the LIFE Mercury-Free framework is designed for scalability. The same methodologies—public awareness campaigns, school programs, collection infrastructure, and policy advocacy—can be adapted to other hazardous household substances with equal urgency, including:

- **Lead** (in paints, old plumbing).
- **Cadmium** (in rechargeable batteries).
- **PFAS** ("forever chemicals" in cookware, textiles).
- **Microplastics** (from packaging and synthetic fibres).

By embedding mercury within a **broader hazardous substances strategy**, the project creates resilience and avoids the risk of "single-issue fatigue" among stakeholders and citizens.

Approach

Apply the behavioural change model used for mercury

The proven three-pillar strategy of LIFE Mercury-Free—**awareness, infrastructure, and incentives**—is transferable to these substances:

- **Awareness:** Public education campaigns tailored to each substance (e.g., "lead-safe homes," "PFAS-free kitchens") will target both urban and rural communities.
- **Infrastructure:** Collection points for cadmium batteries, textile take-back systems for PFAS-treated garments, and incentives for replacing lead-contaminated plumbing can be modelled after the mercury collection pilots.
- **Incentives:** Certification schemes (e.g., "Lead-Free Household" or "Plastic-Free School") can motivate citizens and institutions to transition to safer practices.

Develop disposal and substitution guides for each substance

Practical **guidelines and toolkits** will be produced, drawing from EU best practices and adapted to local conditions in Évora:

- Safe disposal pathways for cadmium batteries and PFAS-contaminated textiles.
- Substitution guides recommending affordable alternatives (e.g., LED lighting and rechargeable batteries without cadmium, ceramic cookware instead of PFAS-coated pans).
- Integration of these guides into municipal waste management communications and school curricula.

Promote safer alternatives through consumer education campaigns

Sustained behavioural change depends on consumer demand for safer products. LIFE Mercury-Free will therefore:

- Collaborate with local retailers to promote safer household products via **eco-labels** and awareness materials.

- Engage schools and universities to conduct **citizen science projects** quantifying local exposure risks (e.g., microplastics in tap water, lead in dust samples).
- Leverage digital tools (apps, dashboards) to guide households in identifying hazardous items and accessing substitution recommendations.

Integration with Évora's Regional Context

Extending LIFE Mercury-Free to other hazardous substances aligns with Évora's dual challenge: modernising waste management while preserving public health in a region with strong cultural heritage and reliance on natural resources. Lead and cadmium risks intersect with the preservation of historic housing and agricultural productivity; PFAS and microplastics resonate with water security and food quality—two central concerns in the Alentejo context.

By embedding this multi-substance approach into Évora's waste infrastructure, educational systems, and municipal policies, the region can serve as a **demonstration hub** for Portugal and other EU regions transitioning from single-issue interventions to integrated household hazardous substance management.

2.7.4 POLAND

Building on the mercury-free approach, Poland will extend its efforts to address other hazardous substances commonly found in households: lead, cadmium, PFAS, and microplastics. These substances pose significant health and environmental risks and are particularly relevant in a Polish context due to legacy infrastructure (e.g., old water pipes, paints) and consumer habits.

The same behavioral change model used for mercury (combining awareness, infrastructure, and incentives) will be applied. Citizens will receive practical guides for identifying and substituting hazardous products, while municipalities will establish dedicated collection and recycling points. Educational campaigns will promote safer alternatives, such as lead-free paints, PFAS-free cookware, and biodegradable packaging.

Pilot initiatives in selected Polish cities will test the feasibility of "Hazard-Free Household Programs," integrating multiple hazardous substances into a single awareness and waste management strategy. These pilots will create replicable templates for broader national and international use.

Actions:

- Apply the awareness + infrastructure + incentives model from LIFE Mercury-Free.
- Develop educational materials and disposal guides for each new substance.
- Promote safer alternatives through consumer campaigns and retailer partnerships.
- Pilot Hazard-Free Household Programs in member cities, building on mercury-free campaigns.

2.7.5 UKRAINE

Building on the experience in Lviv and Ivano-Frankivsk, awareness campaigns and infrastructure may extend to:

- Household batteries, small WEEE, and fluorescent lamps.
- Microplastics
- Lead-containing paints and cadmium-containing plastics.
- New pollutants such as PFAS and microplastics.
- Medical waste.
- Construction waste

The same behavioural change model (awareness + collection infrastructure + stakeholder incentives) will be applied.
A separate direction may be the introduction of campaigns to overcome the consequences of contamination of territories as a result of military operations.

2.8 Communication & Education Continuation

Tools:

- Maintain and update the digital platform created during the LIFE Mercury-Free project.
- Launch interactive apps and games for schools to teach safe disposal and product choices.
- Organize annual “Hazard-Free Home” campaigns in participating cities.

2.8.1 ITALY

Sustainability of the project depends on maintaining communication channels and continuously educating new generations. UNICAM will act as a custodian of project knowledge, ensuring that awareness does not fade once the LIFE project ends. Digital and offline tools will be combined to ensure continuity.

Key communication tools:

- **Maintain and expand LIFE e-HUB in Italian:** The platform will be updated with new resources, local case studies, and interactive educational content.
- **Interactive apps and games for schools:** Design gamified learning tools that teach children how to recognize hazardous substances, dispose of them properly, and choose safer alternatives.
- **Annual “Hazard-Free Home” campaigns:** Organize yearly public events in Camerino and later extend to Marche Region, involving schools, municipalities, and families.
- **Media partnerships:** Collaborate with local TV, newspapers, and regional radio stations to disseminate updates on progress and encourage wider participation.

- **Academic integration:** Include project content in UNICAM's School of Pharmacy courses and promote integration into high school science curricula.

2.8.2 GREECE

- Maintain and update the digital platform created during the LIFE Mercury-Free project, LIFE e-Hub, ensuring it remains a comprehensive resource for information on mercury-free products and safe disposal practices. Innovation Hive as leader of this deliverable will keep updated the hub and the platform
- Launch interactive apps and educational games in schools and universities to engage students in learning about the risks of mercury, safe disposal methods, and making mercury-free product choices.
- Organize annual "Hazard-Free Home" campaigns in participating cities to raise public awareness about mercury-containing products, proper disposal, and alternatives.

2.8.3 PORTUGAL

Maintain and update the digital platform created during the LIFE Mercury-Free project

A central component of sustaining project impact is the continued operation of the **digital platforms** developed during the initial LIFE Mercury-Free phase. The platform will serve as a **knowledge hub** and monitoring tool, integrating educational content, reporting mechanisms, and real-time analytics. Also, continuous updates on Facebook and instagram portuguese pages will ensure that:

- Hazardous substance information remains current, including mercury, lead, cadmium, PFAS, and microplastics.
- New campaign materials, guidelines, and success stories are uploaded for public access.
- Data collected via citizen participation (e.g., household submissions, school challenges) is visualised through dashboards, maps, and progress trackers, supporting evidence-based decision-making for municipal authorities and schools.

2.8.4 POLAND

The LIFE e-HUB will remain active beyond the project timeline as a digital center for communication and education in Poland. It will be regularly updated with new resources, including guides on emerging hazardous substances and interactive tools for schools. Partnerships with Polish universities will ensure that the platform continues to integrate the latest scientific knowledge.

To engage younger audiences, interactive mobile applications and educational games will be developed, teaching safe disposal and responsible consumption in an engaging format. Annual "Hazard-Free Home" campaigns will be launched in Polish cities, combining online and offline activities to raise awareness at scale.

Multilingual outreach will remain a priority, with Polish as the main language, but materials will also be available in Ukrainian, and Belarusian, to reach Poland's growing communities of migrants and to facilitate regional cooperation with neighboring countries.

Actions:

- Maintain and update the LIFE e-HUB platform, integrating new hazardous substances.
- Create interactive apps, games, and VR tools for schools, demonstrating safe disposal and substitution.
- Organize annual "Hazard-Free Home" campaigns, extending beyond mercury to other toxic materials.
- Produce multilingual video content for YouTube, Instagram, TikTok, and LinkedIn, targeting different demographics.

2.8.5 UKRAINE

The LIFE Mercury-Free digital content will be maintained in Ukrainian.
Universities (Lviv Polytechnic and others) will integrate mercury awareness into curricula.
Cooperation with the media in the context of covering the progress of the implementation of the Minamata Convention in Ukraine.

2.9 Stakeholder Engagement

Key Players:

- Local governments
- Environmental NGOs
- Schools and universities
- Retailers and manufacturers

2.9.1 ITALY

Stakeholder engagement is essential to ensure replication and sustainability. UNICAM will build a broad stakeholder coalition that represents government, civil society, academia, and the private sector. By mobilizing these actors, replication becomes not just a project activity, but a shared societal commitment.

Key stakeholder groups:

- **Local governments:** Camerino, Macerata, Ancona, Perugia – central actors for infrastructure and local regulation.
- **Environmental NGOs:** Legambiente, WWF Italy, and local associations to mobilize citizens and volunteers.

- **Schools and universities:** School networks in Marche and Umbria; collaboration with University of Perugia for joint research and education activities.
- **Healthcare institutions:** Marche regional hospitals, pharmacies, and public health agencies to integrate hazardous-substance awareness into preventive health programs.
- **Retailers and manufacturers:** Italian electronics, household goods, and supermarket chains to promote mercury-free and hazard-free alternatives.

Engagement mechanisms:

- **Roundtables and stakeholder forums** hosted annually in Camerino to review progress and plan next steps.
- **Cooperation Agreement:** Signed in M35, ensuring that municipalities and NGOs remain formally committed beyond the project's end.
- **NGO creation:** Support the establishment of the international **"Association of Mercury-Free City Communities"**, with Italy as a founding member, to anchor engagement at the European level.
- **Citizen science:** Encourage households to participate in surveys, waste audits, and campaigns, ensuring grassroots ownership of the project results.

2.9.2 GREECE

Government and Regulatory Bodies

- Ministry of Environment and Energy (Greece): Oversight of hazardous substances policy and mercury regulations.
- Local municipalities: Implementation of public awareness campaigns and collection programs for mercury-containing products.
- Environmental Protection Agencies: Monitoring compliance and supporting safe disposal initiatives.

Educational Institutions

- Schools and universities: Integrating mercury awareness into curricula through interactive apps, games, and workshops.
- Teacher associations: Supporting dissemination of educational materials and training teachers on mercury-free practices.

Industry and Retailers

- Lighting manufacturers and suppliers: Promoting mercury-free lighting alternatives.
- Electronic and battery retailers: Facilitating take-back schemes and educating consumers on safe disposal.

NGOs and Civil Society Organizations

- Environmental NGOs: Advocacy, awareness campaigns, and community engagement.
- Consumer protection groups: Promoting mercury-free products and safe usage practices.

Public and Households

- Citizens as end-users of mercury-containing products: Engaged through campaigns, digital tools (LIFE EHUB), and "Hazard-Free Home" initiatives.

Engagement Tools:

- Workshops, webinars, and training sessions for all stakeholders.
- Digital platforms (LIFE EHUB) and interactive educational apps.
- Public campaigns, competitions, and participatory events to encourage safe disposal and mercury-free choices.

2.9.3 PORTUGAL

Schools and Universities

Educational institutions serve as **multipliers of knowledge and behaviour change**:

- **Schools**: delivery of age-appropriate curricula, facilitation of interactive workshops, and engagement in "Mercury-Free Home" or broader hazardous substance challenges.
- **University of Évora**: provides research expertise, monitoring capacity, evaluation of pilot interventions, and support for digital tools and dashboards. University students can participate in citizen science projects, data collection, and peer education initiatives.

Collaboration with schools and universities ensures **long-term continuity of knowledge transfer** and embeds environmental literacy within the local education ecosystem.

2.9.4 POLAND

Stakeholder engagement will remain at the heart of the After-LIFE Plan. Local governments in Poland (i.e. Łódź and Lesser Poland Voivodeships) will provide policy frameworks and ensure infrastructure funding, while NGOs will drive grassroots initiatives and monitor progress. Schools and universities will continue to act as both knowledge creators and multipliers, ensuring intergenerational transfer of awareness and behavior change.

Retailers and manufacturers (as large retail chains and supermarkets, pharmacies and drugstore chains but also Philips Lighting Poland, Amica Wronki / Indesit, ABB) will be systematically engaged through partnerships that promote mercury-free and hazard-free alternatives. This includes the development of labeling and certification schemes that identify safe products and guide consumer choice. The retail sector will also be involved in sponsoring campaigns and hosting collection points in supermarkets and pharmacies.

All engagement will be coordinated through Quadruple Helix advisory structures, as outlined in Deliverable 2.3, ensuring balanced representation of government, business, academia, and civil society. The Association of Mercury-Free City Communities will serve as the umbrella framework, guaranteeing that stakeholder cooperation is

institutionalized and that Polish partners remain connected to international best practices and networks.

Key Players & Actions:

- Local Governments: Lead policy adoption, infrastructure funding, and regulatory enforcement.
- NGOs: Run grassroots campaigns, monitor implementation, ensure civil society involvement.
- Schools & Universities: Serve as testbeds for educational innovation, research hubs for safer alternatives.
- Retailers & Manufacturers: Transition supply chains to mercury-free and hazardous-free products, label and certify products.

Approach:

- Engage stakeholders via Quadruple Helix advisory structures, formalized during the project (Deliverable 2.3).
- Include stakeholders in the governance of the Association of Mercury-Free City Communities, ensuring representation across all categories.
- Use strategic collaboration agreements (MoUs, charters, joint projects) to sustain cross-sectoral cooperation.

2.9.5 UKRAINE

Key players in Lviv include:

- Local governments: Lviv City Council.
- Regional authorities: Lviv Regional State Administration, State Environmental Inspectorate in the Lviv region.
- NGOs: Zero Waste Lviv, “Batteries, Surrender!”, ECO Cluster.
- Academic institutions: Lviv Polytechnic National University, schools, and educational centres.
- Healthcare and safety institutions: State Institution "Lviv Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine", Main Department of the State Emergency Service of Ukraine in the Lviv Region, Educational and Methodological Center of Civil Protection and Life Safety of the Lviv Region, Urosvit Clinic.
- Waste operators: “Bodnarivka” – a subsidiary of the Lviv municipal company “Green Lviv”, recyclers of WEEE and hazardous waste.

Key players in Ivano-Frankivsk include:

- State authorities: Ivano-Frankivsk Regional State Administration: Department of Health Protection, Department of Ecology and Natural Resources, Department of Civil Protection, State ecological inspection in Ivano-Frankivsk region
- Local self-governments: Ivano-Frankivsk City Council: Department of Emergency Situations, Department of Health Protection, Department of Economic Development, Ecology and Energy Saving

- Educational institutions: Ivano-Frankivsk Academy of Ivan Zolotousty, Vasyl Stefanyk Precarpathian National University, Ivano-Frankivsk National Technical University of Oil and Gas, Ivano-Frankivsk National Medical University, King Danylo University, Network of schools of the city of Ivano-Frankivsk
- NGOs: Bureau of the Ecology of Ukrainian Greek Catholic Church, Social Enterprise "Zero Waste Ivano-Frankivsk", Frankivsk Half Marathon

Stakeholder engagement will continue through cooperation agreements, joint awareness actions, and participation in the Association of Mercury-Free City Communities.

3 INFORMATION REGARDING ACTIVITIES AIMED AT MAINTAINING THE SUSTAINABILITY OF THE PROJECT'S RESULTS AND POTENTIAL FUNDING SOURCES

3.1. Future activities

The continuation of the LIFE Mercury Free initiative after the project's formal completion will focus on maintaining momentum, strengthening stakeholder engagement, and supporting long-term behavioural and environmental change. Planned activities for 2026–2028 build directly on the project's achievements and established partnerships, ensuring that knowledge, tools, and practices continue to be disseminated and applied.

3.1.1. ITALY

Beyond the formal end of the LIFE MERCURY-FREE project, UNICAM commits to ensuring the long-term continuation, scaling up, and institutionalisation of the governance, awareness-raising, and capacity-building actions developed in Italy. Particular attention will be given to the sustainable management of mercury-containing waste and the protection of environmental and public health. UNICAM will promote the integration of the project outcomes into institutional practices and policy frameworks, while fostering continued collaboration with national and regional stakeholders, including public authorities, waste management operators, healthcare institutions, and research organisations. Furthermore, efforts will focus on facilitating the replication and transferability of the developed approaches, tools, and best practices to other Italian regions and potentially to other European contexts, thereby contributing to the broader objectives of EU environmental and health protection policies.

At territorial level, the governance approaches piloted in the Municipality of Camerino will be extended beyond the original project boundaries. The methodologies developed for analysing mercury presence in waste streams, household products and the local food chain, as well as the guidance on correct handling, storage and disposal, are expected to be adopted at regional scale within the Marche Region. This extension will be supported through continued cooperation with local and regional authorities and by the involvement of additional municipalities (including Sefro and Pioraco), increasing the

number of engaged public entities beyond the project lifetime. As a result, the area of governance activities will be maintained and consolidated at regional level, ensuring structural continuity of mercury-related compliance actions.

UNICAM will also continue its role as a scientific and educational hub. The project outcomes will be embedded into university teaching, orientation activities and lifelong learning initiatives, reaching new cohorts of students, professionals and citizens every year. Regular participation in national and international scientific conferences, as well as recurring public engagement events (e.g. science festivals, scientific aperitifs and public debates), will ensure that mercury-related knowledge and best practices remain visible and accessible. These activities underpin the projected increase in the number of individuals reached by education and awareness actions beyond three years, particularly among the general public and young people.

From a compliance and behavioural change perspective, UNICAM plans to sustain and replicate the promotional and educational campaigns launched during the project. Additional compliance campaigns targeting households, schools and local stakeholders are foreseen, building on the positive results already achieved in Camerino. These actions are expected to further improve correct disposal behaviours for mercury-containing waste, contributing indirectly but measurably to the continued reduction of non-appropriately managed waste, even after project closure. Networking and synergies will remain a strategic priority. UNICAM will continue to collaborate with other LIFE and EU-funded projects dealing with hazardous waste, chemicals management and environmental health, ensuring knowledge transfer and mutual reinforcement of results. The project website and communication tools will remain online and periodically updated, supporting a sustained increase in unique visits over time.

Overall, beyond three years, UNICAM future activities will focus on mainstreaming LIFE MERCURY-FREE results into territorial governance, education, public engagement and inter-project cooperation, ensuring that the project's environmental and societal impacts are durable, scalable and embedded in long-term institutional practices in Italy.

3.1.2. GREECE

Following the completion of the LIFE MERCURY FREE project, Innovation Hive will continue supporting the sustainability and further uptake of the project's results in Greece, with particular focus on the replication area of Larissa. Future activities will build upon the knowledge, methodologies and awareness tools developed during the project implementation. Innovation Hive will continue implementing awareness-raising and educational activities related to environmental protection, hazardous waste management and the environmental and health risks associated with mercury-containing products. These activities will target different stakeholder groups, including pupils, the general public, local stakeholders and employees of public bodies. The educational materials and training approaches developed within the project will continue to be used in future capacity-building and awareness initiatives. Furthermore, Innovation Hive will maintain cooperation with key local and regional stakeholders, including the Municipality of Larissa, regional authorities, educational institutions and local organisations. Through these collaborations, the project's results and good practices will

continue to be disseminated and integrated into local environmental awareness and education activities. Innovation Hive will also continue to promote the project outcomes through communication and networking activities, including participation in relevant environmental initiatives and collaboration with organisations working in the fields of environmental protection, sustainable waste management and circular economy. These future activities will be implemented through the organisation's own institutional capacity and through participation in future national or European initiatives related to environmental sustainability, ensuring the continued visibility and uptake of the LIFE MERCURY FREE project results beyond the project duration.

3.1.3. PORTUGAL

Future activities in the replication area will continue at a reduced but steady pace, building on the structures, materials, and stakeholder relationships established during the LIFE Mercury Free project. In addition, Portuguese research institutions involved in the project are expected to continue using the knowledge and analytical experience developed during LIFE Mercury Free in future scientific activities related to chemical safety and environmental monitoring.

Continued use of educational materials in schools

Schools in Évora (3 elementary, 3 middle, 3 secondary) have already integrated the project's mercury-awareness content into their teaching. After the project's end, they are expected to:

- Reuse LIFE Mercury Free educational materials in subsequent academic years.
- Deliver additional awareness sessions using the same content, without requiring new funding.
- Reach new student cohorts annually, contributing to the estimated additional 500 persons reached beyond the project period.

This continuation is supported by teachers' feedback and the fact that the materials are already prepared, accessible, and easy to integrate into regular curricula.

Ongoing dissemination by local authorities and stakeholders

Local public bodies (e.g., Parish Council of Nossa Senhora da Saúde) and participating organisations (DECO, A Muralha veterinary hospital) are expected to continue:

Sharing project messages through their institutional communication channels.

Using project-developed guidance in community outreach and environmental education.

Promoting correct disposal practices for mercury-containing products.

These activities rely on existing institutional routines and do not require additional funding. The continued use of these materials will help ensure that awareness about mercury risks and safer consumer choices remains present in environmental education activities within local schools.

Continued awareness events and school-led initiatives

Although the project has ended, participating schools and local partners are expected to organise at least one additional awareness event using project materials. This is reflected in the KPI increase from 10 to 11 events.

Future events may include:

- School awareness sessions
- Classroom activities
- Small-scale competitions or thematic days
- Integration into environmental education programmes

Sustained website visibility

The project website will remain publicly accessible. Based on the final-year monthly traffic, it is expected to continue receiving visits for at least three years due to:

- Teachers and students accessing downloadable materials
- Stakeholders referencing the site in institutional contexts
- Continued organic visibility through search engines and academic citations

This supports the projection of 13,000 cumulative visits beyond 3 years.

Continued cooperation with stakeholders

Stakeholder involvement is expected to persist informally:

- Schools will continue using project materials.
- Public bodies may integrate project messages into their environmental communication.
- NGOs and private partners may continue referencing the project in awareness activities.

The number of engaged public bodies is expected to increase from 10 to 12, reflecting the likelihood that additional schools or municipal units will adopt the materials.

Ongoing compliance promotion

While the project will not implement new campaigns, local authorities are expected to:

- Reuse project materials to promote correct disposal of mercury-containing products.
- Integrate project messages into existing environmental campaigns.

This justifies the increase from 2 to 4 compliance campaigns in the long term.

Continued networking

The established networking link with the Erasmus+ project is expected to remain active, enabling:

- Occasional exchange of educational practices
- Potential collaboration in future initiatives
- Continued informal knowledge sharing

The number of networked projects remains 1, but the relationship is expected to continue beyond the project.

Long-term behavioural and governance impacts

Although no new financial investments are foreseen (0 € catalytic effect), behavioural and governance impacts will continue because:

- All materials are already developed and require no additional cost.
- Stakeholders have integrated project messages into their regular activities.
- Awareness and improved disposal practices are expected to persist even without new campaigns.

This ensures long-term continuation of project impacts despite the absence of additional funding.

3.1.4. POLAND

A key element of the post-project phase will be the organisation of a recurring training course at the University in the years 2026–2028, targeting approximately 150 participants. These courses will replicate the successful training model developed during the project and will support the continued professional development of municipal staff, waste operators, educators, and other relevant stakeholders. By maintaining this educational offer, the project's methodologies and best practices will remain accessible and actively used.

Regarding monitoring of Waste Management Indicators, then Future activities will also include ongoing monitoring of the indicator "Mass reduction due to appropriate disposal", based on municipal waste management data for the City of Łódź.

The trend observed between 2022 and 2024 indicates a gradual, approximately linear increase in appropriate disposal of mercury-containing waste. Assuming this trajectory continues, a slow but steady rise in the indicator is expected in the coming years, potentially reaching 1,918 kg once the 2026–2028 data become available.

We plan to develop strong cooperation with key waste management actors in Łódź, including:

MPO Łódź – the municipal company responsible for waste collection, sorting, and city cleaning services.

PSZOK Zamiejska – the municipal selective waste collection point.

This collaboration will continue through joint information campaigns aimed at improving public compliance with proper disposal of mercury-containing waste. Two major compliance-promotion campaigns are planned for 2026 and 2027, focusing on raising awareness among residents and supporting correct disposal behaviours.

During the project, partnerships were developed with the State Academy in Biała Podlaska and two secondary schools in Łódź. These collaborations will be maintained and expanded through joint information and awareness-raising activities in 2026–2028. The total number of engaged stakeholders in this extended cooperation will reach six, strengthening the educational outreach and ensuring that mercury-free practices are embedded in local learning environments.

Digital Outreach and Long-Term Visibility

The project's digital resources will continue to play a central role in sustaining its impact. The goal for the post-project period is to reach up to 50,000 visitors across all online platforms, including:

The main project platform: https://platform.life-mercury-free.eu/

The supplementary e-learning and knowledge hub: https://e-hub.life-mercury-free.eu/en/

These platforms will remain accessible and periodically updated, ensuring long-term visibility of project outputs and continued access to tools, guidelines, and educational materials.

The project, conducted between 2022 and 2026, has demonstrated that residents are concerned about the negative impact of environmental pollution on health. Legal changes in waste management are also driving increased interest in the topic of pollution. To maintain and enhance the project's impact, the AGH University of Krakow plans the following activities for 2026-2028:
1. Maintaining further contact with the project leader, Lodz University of Technology, and coordinating activities, including building a network of partners interested in eliminating mercury from products and industrial processes.
2. Maintaining contact with existing project partners, including, in particular, the Municipal Cleaning Company Ltd. in Krakow (MPO Sp. z o. o. w Krakowie) and the "Dom Harcerza" Youth Cultural Center (MDK “Dom Harcerza”).
3. Webinars for approximately 150 participants.
4. Development of the project website: https://mercuryfree.agh.edu.pl/

3.1.5. UKRAINE

Following the completion of the LIFE MERCURY-FREE project, Ukrainian partners will continue promoting the project’s results through educational, awareness-raising and stakeholder engagement activities in the cities of Lviv and Ivano-Frankivsk. Future activities will build on the partnerships and knowledge developed during the project implementation and will aim to maintain the visibility and practical use of the project outcomes beyond the project duration.

The main role in sustaining the project activities will be played by Lviv Polytechnic National University and Ivano-Frankivsk Academy Ivana Zolotoustoho. These institutions will continue integrating the project results into educational programmes, research activities and outreach initiatives addressing environmental protection, hazardous waste management and mercury-related risks.

Future actions will include awareness-raising campaigns, educational events and workshops targeting students, pupils, local communities and environmental stakeholders. Educational materials, presentations and communication tools developed within the project will continue to be used during lectures, public seminars and training activities organised by the partner institutions.

Cooperation established during the project with local authorities, civil society organisations and environmental stakeholders will also be maintained. In particular, collaboration with municipal authorities and organisations involved in waste management and environmental protection will support continued dissemination of good practices related to the safe handling and disposal of mercury-containing products.

Academic partners will also continue promoting the project results through scientific and educational activities, including participation in conferences, public lectures and environmental awareness initiatives. These activities will contribute to maintaining the

visibility of the LIFE MERCURY-FREE project and ensuring that its knowledge and tools remain accessible to a broad range of stakeholders.

Despite the challenging socio-economic conditions related to the ongoing war in Ukraine, the project partners remain committed to continuing environmental awareness activities and strengthening cooperation networks created during the project. These future initiatives will support the gradual dissemination of mercury-free practices and contribute to improved environmental responsibility and hazardous waste management in Ukrainian communities beyond the project lifetime.

3.2. Catalytic effect

The LIFE Mercury Free project generates a strong catalytic effect by amplifying the capacity of the consortium to disseminate knowledge, accelerate technological uptake, and stimulate broader systemic change beyond the project's formal scope.

3.2.1. ITALY

Beyond the formal end of the LIFE MERCURY-FREE project, a clear catalytic effect is expected in Italy, specifically in the Camerino area, driven by the continued commitment of UNICAM. Although no additional external funding or commercial revenues are foreseen, the catalytic nature of the project is reflected in the mobilisation of internal financial resources that will ensure the durability and expansion of key project outcomes. UNICAM has committed to allocating an own financial contribution of €8,000 beyond the project end, outside the approved LIFE budget and not counted as project co-financing. This investment will be dedicated exclusively to dissemination, awareness-raising and stakeholder engagement activities related to mercury risk prevention and proper management of mercury-containing waste. The allocation of internal funds demonstrates that the project has successfully embedded its objectives within the university institutional priorities, triggering continued action without reliance on further LIFE funding.

This catalytic effect is primarily qualitative and structural rather than market-driven. The additional resources will enable the sustained involvement of researchers from multiple UNICAM departments in public-oriented initiatives, including scientific festivals, educational events, public lectures and local outreach actions. These activities are expected to reach new segments of the population over time, reinforcing behavioural change and consolidating correct practices for mercury-containing waste disposal among citizens, students and local stakeholders. Furthermore, the post-project financial commitment supports the replication and consolidation of governance and awareness models developed during the project. By maintaining visibility of LIFE MERCURY-FREE results and integrating them into recurring institutional activities, UNICAM acts as a multiplier of project impacts at local and regional level. This approach strengthens cooperation with municipalities, schools, NGOs and civil society organisations, facilitating the gradual expansion of project-inspired actions beyond Camerino.

In summary, the catalytic effect in Italy is expressed through the activation of internal financial resources that ensure continuity, scalability and institutional ownership of project results. The €8,000 post-project investment by UNICAM confirms that LIFE

MERCURY-FREE has triggered long-term commitment and self-sustaining mechanisms, allowing its environmental and societal benefits to persist and grow well beyond three years after project completion.

3.2.2. GREECE

Beyond the project duration, Innovation Hive will continue supporting awareness-raising, training and stakeholder engagement activities related to the environmental risks of mercury and the proper management of mercury-containing waste. These activities will build upon the methodologies, educational materials and stakeholder networks developed during the LIFE MERCURY FREE project. The catalytic effect is expected to generate additional small-scale investments from the beneficiary's own resources, estimated at approximately 2,000 €, which will support the continuation of dissemination and awareness activities in Larissa. These resources will cover organisational and communication costs related to workshops, awareness sessions and dissemination activities aimed at maintaining the visibility and uptake of the project results. Through these continued activities and the established cooperation with local and regional stakeholders, the project's approaches and good practices are expected to remain in use beyond the project duration, contributing to the sustained promotion of environmentally responsible waste management practices.

3.2.3. PORTUGAL

No additional financial investments have been triggered in the Évora replication area as a direct consequence of the LIFE Mercury Free project. The University of Évora will not allocate any new institutional funds beyond the approved project budget for post-project activities. Continuation of awareness and dissemination actions will rely on voluntary engagement of staff and on the reuse of already developed materials and existing institutional channels. As no new financial resources have been secured or committed, the catalytic effect remains 0 € at project end and beyond three years.

Nevertheless, the project has generated non-financial catalytic effects by establishing educational resources, awareness materials and stakeholder engagement mechanisms that can continue to be used without requiring additional financial investment. In particular, the educational materials developed during the project and the communication channels established with local schools, public bodies and civil society organisations provide a basis for continued awareness activities in the Évora area. The experience and knowledge developed by the project team may also support future research initiatives or collaborations related to chemical safety and environmental awareness in Portugal, even though such initiatives cannot be quantified as direct financial investments at this stage. Therefore, while no measurable financial catalytic effect has been triggered, the project has created enabling conditions for continued dissemination, education and stakeholder engagement activities in the replication area.

3.2.4. POLAND

In the future, the Technical University of Lodz (TUL), acting as a beneficiary, will allocate its own financial contribution of €500 dedicated exclusively to project dissemination activities, in addition to the required co-financing and outside the approved project budget. This voluntary investment demonstrates institutional commitment and significantly enhances the project's multiplier potential.

The additional dissemination resources provided by TUL enable broader communication of project outcomes, ensuring that knowledge, methodologies, and best practices developed within the project reach a wider audience. This increases the likelihood that the project's solutions will be integrated into long-term industrial, educational, and regulatory practices, thereby extending the project's impact well beyond its official duration.

TUL's decision to contribute funds beyond the project budget signals a strong institutional endorsement of the project's objectives. This proactive engagement encourages other stakeholders to invest in complementary initiatives, fosters new collaborations, and supports the development of follow-up projects that build on the LIFE Mercury Free results.

AGH - University of Krakow, like the project leader, Lodz University of Technology, declares that it has an influence on the project's sustainability with a €600 contribution, which will be significant for the activities described in section 3.1.4. The intention to sustain the project's results is based on feedback on the activities undertaken to date, but also on the scientific objectives that are crucial for the development of social and commercial applications in the Excellence Initiative - Research University as Priority Research Areas (POB):

1. Sustainable energy technologies, renewable energy sources and energy storage, and resource management. Design, production, application, synergy, and process integration.

2. New technologies for the circular economy: combining business models with eco-innovations to increase productivity and minimize waste, as well as create and utilize knowledge.

3. Water-energy-climate: an interdisciplinary approach to sustainable development.

3.2.5. UKRAINE

Beyond the formal end of the LIFE MERCURY-FREE project, activities in Ukraine will continue primarily through educational, awareness-raising and stakeholder engagement initiatives coordinated by Lviv Polytechnic National University and Ivano-Frankivsk Academy Ivana Zolotoustoho.

Project results and materials developed during the implementation phase will remain publicly available through the project platforms and will continue to be used in

educational programmes, workshops and outreach activities related to environmental protection and safe management of mercury-containing products.

In Lviv, cooperation established with local stakeholders during the project will support the continuation of awareness activities on mercury risks and proper disposal of mercury-containing waste. Educational events and public information activities will be integrated into university outreach programmes and cooperation with local organisations involved in environmental protection and waste management.

In Ivano-Frankivsk, the experience gained within the project will be used to continue promoting environmentally responsible practices and raising public awareness of mercury-related risks. Local academic and civil society partners will maintain communication with municipal stakeholders and support dissemination of the project's key messages among students, schools and the broader community.

Despite the challenging conditions related to the ongoing war and pressure on municipal budgets, the project partners remain committed to maintaining the visibility of LIFE MERCURY-FREE results and supporting further awareness of mercury risks in Ukrainian communities. The cooperation networks created during the project will facilitate the continuation of knowledge transfer and environmental education activities beyond the project duration.

3.3. Continuation

The International Network of Mercury-Free City Communities (https://mfcc.info.p.lodz.pl/) will serve as the primary mechanism for sustaining the legacy of the LIFE Mercury Free project beyond its formal end.

3.3.1. ITALY

Beyond the project end, the LIFE MERCURY-FREE activities in Italy will be continued in the same territorial context as during project implementation, with a focus on the Camerino area, albeit at a lower operational scale. UNICAM will ensure continuity by integrating the project core themes and methodologies into its routine academic, educational and outreach activities, rather than through dedicated, large-scale project actions. Continuation will mainly concern awareness-raising, education and knowledge transfer on mercury risks and correct management of mercury-containing products and waste. Project results will remain embedded in university lectures, student orientation initiatives, public engagement events and scientific dissemination activities regularly organised by UNICAM. While the frequency and intensity of these actions will be reduced compared to the LIFE project phase, their repetition over time will ensure sustained visibility and long-term reinforcement of correct behaviours among students, citizens and local stakeholders.

At local level, cooperation with the Municipality of Camerino and other interested municipalities in the surrounding area will continue on an informal and advisory basis, like Sefro and Pioraco. The governance tools, technical guidance and compliance-oriented

approaches developed during the project will remain available to local authorities and can be applied whenever relevant, particularly in relation to mercury-containing waste collection and environmental awareness campaigns. This ensures that the project operational legacy is preserved within the same premises and territorial context.

Overall, the continuation beyond three years is characterised by a gradual transition from project-based implementation to institutionalised practices within UNICAM and the local governance framework. Although carried out at a lower scale, these continued activities will maintain the project's environmental and social benefits over time, ensuring that the LIFE MERCURY-FREE results in Camerino remain active, usable and impactful well beyond the project formal duration.

3.3.2. GREECE

Following the end of the LIFE MERCURY FREE project, Innovation Hive will continue implementing selected awareness-raising and educational activities in the same area, particularly in the city of Larissa and its surrounding region. These activities will build on the knowledge, tools and educational materials developed during the project implementation. The continuation will take place at a smaller scale compared to the project implementation phase and will mainly include awareness sessions, stakeholder engagement activities and dissemination of project results through existing cooperation networks with local stakeholders, such as the Municipality of Larissa, educational institutions and local organisations. Through these activities, the project's results and key messages will remain visible and accessible to local communities, contributing to the continued promotion of responsible environmental behaviour and improved awareness regarding the environmental risks associated with mercury-containing products.

3.3.3. PORTUGAL

Project-related activities in the Évora replication area will continue beyond the project's end, although at a reduced scale. Participating schools have confirmed their intention to reuse the LIFE Mercury Free educational materials in future academic years, ensuring ongoing awareness among new student cohorts. Local authorities and stakeholders, including the Parish Council of Nossa Senhora da Saúde, DECO, and the veterinary hospital A Muralha, plan to maintain selected awareness and governance practices using their existing institutional resources. The University of Évora will continue disseminating project outputs through its academic and institutional channels. These continuation activities do not require new funding and rely on voluntary engagement and the reuse of already developed materials.

The project website and digital materials will remain publicly accessible, allowing teachers, students, and stakeholders to continue accessing educational resources and information produced within the project. The knowledge and experience acquired by the University of Évora during the implementation of LIFE Mercury Free will also remain available for future academic activities, including teaching, student projects, and potential research initiatives related to environmental contaminants and chemical safety.

Furthermore, the stakeholder relationships established during the project are expected to remain active at an informal level, facilitating occasional collaboration in environmental awareness and education activities within the local community. Through these mechanisms, the main results of the project are expected to remain visible and useful in the Évora area, supporting the long-term objective of increasing public awareness about mercury risks and safe disposal practices.

3.3.4. POLAND

The main task of the TUL will be supporting the International Network of Mercury-Free City Communities (https://mfcc.info.p.lodz.pl/), which will serve as the primary mechanism for sustaining the legacy of the LIFE Mercury Free project beyond its formal end. Its continued operation will be ensured through existing institutional structures, staff capacities, and available operational resources, without the need for dedicated project-level funding. This approach guarantees that the network remains active, though at a reduced scale compared with the intensity and scope achieved during the project's implementation phase.

As the project transitions into its post-completion phase, activities will focus on:

Updating materials on the online platform (https://platform.life-mercury-free.eu/) and ensuring basic maintenance to preserve access to the knowledge, tools, and resources developed during the project. Sustaining communication through the Polish project webpage (https://life-mercury-free.p.lodz.pl/) to keep member cities and stakeholders informed, though with fewer events, workshops, and coordinated outreach activities. Supporting informal knowledge exchange, enabling cities to continue sharing experiences and good practices related to mercury-free solutions, but without the structured and resource-intensive coordination previously supported by project funding.

Even at a lower operational intensity, the network will continue to deliver meaningful value by:

Serving as a reference point for municipalities seeking guidance on mercury-free technologies, policies, and implementation pathways.

Ensuring long-term visibility of the project's results and maintaining open access to its outputs.

Encouraging gradual, incremental replication of mercury-free solutions as cities continue to engage with the platform and each other.

Providing a foundation for future collaborations, including potential new initiatives that could reactivate or expand the network's activities with renewed funding.

As the project's beneficiary, AGH – University of Krakow sees its future responsibilities as collaborating with the current project leader, Lodz University of Technology, and participating in ongoing initiatives. Maintaining contacts and supporting the activities of project partners with acquired knowledge and experience. Sharing knowledge and

experience with other organizations willing to collaborate and seeking information on reducing mercury levels in the environment.

3.3.5. UKRAINE

Beyond the formal end of the LIFE MERCURY-FREE project, a catalytic effect is expected in Ukraine through the continued engagement of the academic partners and the stakeholder networks established during the project implementation. The activities will be primarily coordinated by Lviv Polytechnic National University and Ivano-Frankivsk Academy Ivana Zolotoustoho, which will continue to disseminate project results and promote mercury risk awareness through educational, research and outreach activities.

Although no direct commercial revenues are foreseen, the catalytic effect will manifest through the mobilisation of institutional resources and the integration of project results into ongoing educational and environmental initiatives. Universities will continue to use the knowledge, educational materials and communication tools developed during the project in academic courses, public lectures, workshops and cooperation with schools and local communities.

In Lviv and Ivano-Frankivsk, the stakeholder networks created during the project — including cooperation with local authorities, environmental organisations and waste management stakeholders — will facilitate the continued dissemination of good practices related to the safe handling and disposal of mercury-containing products. These networks provide a foundation for future environmental initiatives and potential follow-up projects addressing hazardous waste management and environmental awareness.

Despite the challenging socio-economic conditions caused by the ongoing war in Ukraine, the project partners remain committed to maintaining and expanding the visibility of LIFE MERCURY-FREE results. The continuation of awareness activities and stakeholder cooperation is expected to contribute to long-term behavioural change, increased environmental responsibility and gradual replication of the project's approaches in other Ukrainian municipalities.

In this context, the catalytic effect of the project in Ukraine is primarily expressed through the strengthening of institutional capacities, the integration of mercury-related topics into environmental education and the creation of sustainable cooperation networks that will support further dissemination and application of project outcomes well beyond three years after the project completion.

4 CONCLUSION

The Association of the Mercury-Free City Communities has been designed as a voluntary and collaborative platform, without centralized governance or binding obligations for its members. Participation is entirely based on the willingness of municipalities, institutions, and organizations to share knowledge, exchange good practices, and explore pathways towards mercury-free and hazard-free communities. The signing of the Cooperation

Agreement (Annex #1) is therefore not the beginning of mandatory commitments, but rather the opening of an opportunity to take part in a community of practice.

1. Exchange of Experiences and Knowledge

After joining, members will be invited to contribute to informal exchanges of information on local activities. This may include short updates, case studies, or notes about campaigns, waste collection initiatives, or educational programs already taking place in their cities or institutions. These exchanges will not follow a strict reporting format but will serve as inspiration for other members to adapt ideas to their own contexts.

2. Suggestions and Voluntary Roadmaps

The Association may suggest broad directions of action, such as expanding access to collection points, introducing awareness campaigns, or exploring alternatives to mercury-containing products. However, the implementation of these suggestions will remain entirely voluntary. Municipalities or organizations may adapt them depending on their local priorities, capacity, and resources. In some cases, members may develop "roadmaps" to indicate their intentions and primarily serve as guidance for their own planning.

3. Awareness and Community Activities

Members are encouraged to organize local activities inspired by LIFE Mercury-Free methods, such as school workshops, public events, or social media campaigns. The Association can provide toolkits, templates, and examples, but each member decides independently whether, how, and when to apply them. Activities will thus be diverse and tailored to the specific cultural and social context of each participating city or organization.

4. Informal Monitoring and Sharing of Progress

The Association will promote the exchange of informational notes. Members may voluntarily share achievements, lessons learned, or challenges encountered. These notes may be compiled into occasional newsletters or thematic summaries, highlighting inspiring practices without creating administrative burdens. This ensures transparency while preserving the voluntary and non-hierarchical nature of the network. Members will also gain access to the LIFE e-HUB platform, enabling them to exchange knowledge, policy tools, and educational materials with partners across Europe.

5. Gradual Expansion and Inspiration for Future Actions

As the network grows, the Association may gradually encourage members to look beyond mercury and consider other hazardous substances, such as lead, cadmium, PFAS, or microplastics. This will take the form of suggestions and shared experiences. Over time, the voluntary adoption of such initiatives will help shape a broader movement toward hazard-free households and cities in Poland and across Europe.

5 ANNEX

Note. Agreement to Establish an International Network of Mercury-Free City Communities is signed. More details is here: https://mfcc.info.p.lodz.pl/

Agreement of Intent to Establish an International Network of Mercury-Free City Communities

Preamble

1. **Politechnika Lodzka**, having its registered office at str **Zeromskiego 116, Lodz, 90-924, Poland**, represented by **prof. Volodymyr Mosorov**, hereinafter referred to as "**Party A**"
2. **University of Camerino**, having its registered office at **Piazza Cavour 19/F, 62032, Camerino (MC), Italy**, represented by **Rector Graziano Leoni**, hereinafter referred to as "**Party B**".
3. **Akademia Gorniczo-Hutnicza im. Stanislawa Staszica w Krakowie,** having its registered office at **al. Mickiewicza 30, 30-059 Krakow**, represented by V**ice-Rector for Cooperation – Professor Rafał Wiśniowski,** hereinafter referred to as "**Party C**".
4. **Innovation Hive**, having its registered office at **Venizelou 141, Larissa, 41222, Greece** represented by **Panagiotis Koutoudis**, hereinafter referred to as "**Party D**".
5. **Lviv Polytechnic National University**, having its registered office **at 12 Bandera str., 79013, Lviv, Ukraine,** represented by **prof. Dmytro Fedasyuk,** hereinafter referred to as **"Party E".**
6. **Full name of Institution F]**, having its registered office at **[address]**, represented by **[name and title]**, hereinafter referred to as "**Party F**".

Recognising the urgent need to eliminate mercury pollution and exposure in urban environments, and acknowledging the shared responsibility of cities to protect public health, ecosystems, and future generations, hereby express their joint willingness to establish an international community dedicated to promoting cities free from mercury-containing products.

This Agreement of Intent, hereinafter referred to as the Agreement, sets out the basic principles, objectives, and proposed framework for establishing a Network of Mercury-Free City communities (the "Network").

Article I: Purpose

The purpose of this Agreement is for the signing Parties to affirm:

- Promote the phase-out of mercury use in urban activities, healthcare, industry, and commerce.
- Support policies and practices that prevent mercury emissions and pollution.
- Sharing knowledge, best practices, and technical expertise to accelerate the transition to a mercury-free economy.
- Collaborating on awareness campaigns and educational initiatives.
- Supporting international action consistent with the Minamata Convention on Mercury.

Article II: Founding Principles

The Parties signing this Agreement are guided by the following principles:

- Environmental Justice: Ensuring the protection of all communities, especially vulnerable groups, from exposure to mercury.
- Transparency and Accountability: Promoting open reporting and responsible management.
- Scientific Integrity: Basing decisions on the best available scientific data.
- Global Solidarity: Fostering cross-border cooperation to address shared environmental problems.

Article III: Participation in the Agreement

Participation in the future Network is open to:

- Municipalities and city councils.
- Regional and local authorities.
- Social coalitions and civil society organizations committed to mercury-free goals.
- Universities and schools
- Health institutions.

The Parties voluntarily sign this Agreement and express their willingness to actively participate in the initiatives of the future Network, the organization of which will be regulated in a separate agreement.

Article IV: Proposed Organizational Structure of the Future Network

The Network will be organized as a collaborative network consisting of:

- A Steering Committee composed of representatives of the founding cities.
- A Secretariat coordinating communications, meetings, and documentation.
- Working Groups focusing on specific areas, such as healthcare, waste management, and education.

Article V: Network Activities

Initial activities of the Network may include:

- Organising an inaugural summit to formalize the Network's structure.
- Creating a shared database of mercury-free policies and technologies.
- Organising global campaigns to designate "Mercury-Free Cities."
- Collaborating with international organisations to coordinate activities.

Article VI: Signatories

By signing this Agreement, the representatives confirm their willingness to participate in the creation of the Network and work together towards a mercury-free future.

Article VII: Concluding Observations

This Agreement of Intent is non-binding and does not create any legal or financial obligations. It serves as a declaration of common purpose and a framework for future cooperation, the details of which will be specified in a separate agreement.

Article VIII: Language versions of the Agreement

The Agreement has been drawn up in English, Polish, Italian, Ukrainian, Greek and Portuguese versions, each of which is equivalent.