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LIFE MERCURY-FREE

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

D6.6 Exploitation Plan including Replication Component

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1. Introduction

The LIFE MERCURY-FREE project addresses the challenge of environmental contamination from mercury-containing household products, often mishandled due to insufficient awareness and disposal infrastructure. By piloting integrated awareness campaigns, governance measures, and multi-stakeholder cooperation in Poland, Ukraine, Portugal, Italy, and Greece, the project has laid the groundwork for sustainable mercury-free city models.

The exploitation and replication goals are threefold:

- to ensure project results remain accessible and functional beyond the project lifetime;
- to facilitate adoption by municipalities, NGOs, and educational institutions across the EU and neighboring states;
- to provide a structured framework for policy alignment with EU environmental directives.

The expected impact is significant: cities benefit from reduced hazardous waste, citizens from safer environments, and the EU from strengthened compliance with the Green Deal and Minamata Convention. This deliverable consolidates how key results will be used, who will benefit, and how they will be institutionalized.

2. Exploitation Strategy

2.1 Key Results Identified for Exploitation

- **LIFE e-HUB platform** - Central to exploitation, the e-HUB integrates three functions: project website, electronic community of practice, and a Moodle-based educational space. It houses training materials, policy documents, and forums for citizen–municipality dialogue. Post-project, it will act as the backbone of Mercury-Free City Communities, ensuring continuous access to resources, online consultations, and networking among practitioners.

- **Roadmap for Mercury-Free Cities** - Developed through stakeholder dialogues and pilot city testing, the Roadmap offers municipalities a phased approach to mercury reduction, covering awareness campaigns, collection systems, and regulatory measures. Its exploitation lies in its adaptability: it can be used as a policy template by cities of varying size and resources.
- **Summer School outputs and training modules** - The Summer Schools trained municipal officers, NGOs, and educators. Their materials, like lectures, manuals, interactive exercises, are available in open format. They will continue to be applied in replication activities, providing a ready curriculum for future local or regional training events.
- **Good Practice Guides and Manuals** - These manuals (deliverable D6.5) compile tested awareness strategies, waste collection schemes, and case studies from the pilot cities. They are designed for practical use: municipalities can directly adopt campaign templates, NGOs can reuse community engagement tools, and schools can integrate materials into curricula.
- **MLE methodology and outcomes** - The Mutual Learning Exercises (MLE) created structured exchanges between pilot and control cities, resulting in a methodology for peer-to-peer replication. Its value for exploitation lies in providing a blueprint for future city-to-city cooperation: a tested format for knowledge exchange, joint workshops, and evaluation.

2.2 Target Stakeholders and Users

Municipalities and public authorities	Direct users of the Roadmap, Guides, and e-HUB. They gain tools for integrating mercury-free practices into waste management strategies
NGOs and civil society groups	Multipliers of awareness and behavioral change, they will exploit manuals and training materials to sustain citizen campaigns

Educational institutions	Schools and universities will embed modules from Summer Schools into curricula, shaping long-term behavioral change
EU and non-EU neighboring countries	Cities in Ukraine, Belarus, Moldova, and the Western Balkans, often lacking formal hazardous waste systems, represent key replication users of the project's low-cost awareness and collection solutions

2.3 Exploitation Mechanisms

1. Institutionalisation of LIFE e-HUB and Mercury-Free City Communities

The e-HUB will continue to serve as a digital platform, hosted by universities and supported by NGOs. Mercury-Free City Communities will be coordinated online, enabling municipalities to exchange data, campaign strategies, and policy updates. Active student involvement through internships and thesis projects will ensure both the continuity of content and the cost-effective operation of the platform.

2. Cooperation Agreement and NGO "Association of Mercury-Free Cities"

A formal Cooperation Agreement among project partners underpins the creation of the NGO, providing a solid foundation for its operations. This NGO will offer the legal and organizational structure necessary to expand the network, organise events, and advocate for mercury-free policies. Membership will be open to new municipalities and NGOs, enabling the community to grow organically and extend its impact.

3. Policy uptake and alignment with EU waste/environmental directives

The project results will be framed within key EU instruments, including the Waste Framework Directive, the Minamata Convention, and the Zero Pollution Action Plan. This alignment ensures that municipalities adopting LIFE MERCURY-FREE tools also comply with EU obligations, thereby enhancing the

attractiveness and applicability of these solutions. To maximise impact, the consortium will actively engage in dissemination efforts directed at EU institutions and national ministries, linking project outputs to ongoing policy initiatives.

3. Replication Strategy

Replication is a cornerstone of LIFE MERCURY-FREE, ensuring that the lessons and models developed in pilot and control cities extend to other municipalities across Europe and neighboring countries. While exploitation focuses on sustaining outputs, replication is concerned with scaling and transferring those outputs to new contexts. This section outlines the mechanisms, potential, and pathways for replication within and beyond the consortium.

The project's replication foundations were built by involving both **pilot cities** (Lviv, Ivano-Frankivsk, Łódź, and Krakow) and **control cities** (Camerino, Évora, and Larissa). This dual structure provided a live test of transferability.

- **Pilot cities** served as laboratories for developing and validating measures: awareness campaigns, waste collection systems, governance dialogues, and monitoring procedures. Their experiences demonstrate that mercury-free initiatives can be integrated into municipal systems, even in contexts with limited resources (e.g., Ukraine).
- **Control cities**, functioned as first replicators, demonstrated that replication is feasible with fewer resources, as long as municipalities have access to training, manuals, and peer support.

A key replication tool was the MLEs. These structured exchanges created a bridge between pilot and control cities. MLEs involved workshops, peer reviews, and site visits where municipalities analyzed each other's practices, identified transferable solutions, and co-created localized action plans.

3.1 Replication Pathways and Scenarios

Replication potential extends well beyond the initial seven cities. LIFE

MERCURY-FREE deliberately built networks and outputs that can be reused by municipalities, NGOs, and educational actors outside the consortium. Particularly, replication can follow different scales and levels of ambition. The project foresees three main pathways:

1. **Direct replication (full model adoption)**

In the full adoption scenario, cities implement the complete Mercury-Free City model, which encompasses awareness campaigns, waste collection systems, stakeholder dialogues, and active engagement with the e-HUB. This approach is particularly suitable for medium-to-large municipalities that already have established waste management structures capable of integrating mercury-specific measures. For instance, a city like Krakow could fully replicate the package by embedding the Roadmap into municipal waste planning while mobilizing schools through the Summer School curriculum.

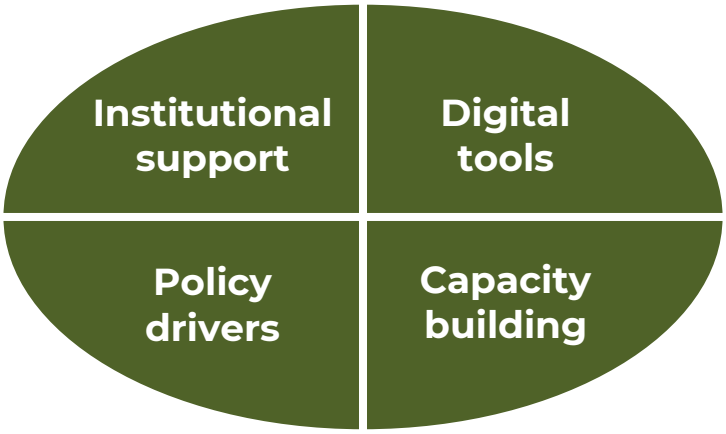
2. **Partial replication (adopting selected components)**

In the partial replication scenario, municipalities or NGOs select specific tools, such as awareness campaigns, collection points, or educational modules, according to their local capacity and resources. This approach is especially relevant for smaller municipalities with limited budgets, which can prioritize public awareness initiatives before committing to larger infrastructure investments. For example, a small town in Portugal might start with campaigns based on the Best Practice Guide and defer infrastructure upgrades until additional funding becomes available.

3. **Transfer to other pollutants or contexts**

The methodologies tested in the project, such as awareness raising, e-HUB community management, and MLE peer learning, are not limited to mercury but can be adapted to address other hazardous substances, including e-waste, pharmaceuticals, and plastics. This adaptability broadens the project's long-term relevance, positioning LIFE MERCURY-FREE as a model for wider environmental health interventions. For instance, NGOs in Greece could apply the campaign templates to raise awareness on the improper disposal of

pesticides or pharmaceuticals, using the same citizen engagement logic. Overall, replication will be reinforced by the following tools:



Therefore, the replication strategy builds on tested pilot and control city experiences, ensures accessibility of knowledge products, and establishes clear pathways for municipalities of different capacities. By offering both full and partial replication scenarios, and enabling transferability to other pollutants, LIFE MERCURY-FREE maximizes its potential for long-term impact across the EU and neighboring regions.

4. Factors Influencing Exploitation and Replication

Exploitation and replication of LIFE MERCURY-FREE results will not occur in a vacuum. They depend on a set of external and internal factors that can either accelerate or hinder the adoption of mercury-free practices in cities. Understanding these factors is critical to designing effective support mechanisms, anticipating risks, and identifying opportunities for scaling.

4.1 Drivers

a. EU Green Deal and Zero Pollution Agenda: The European Green Deal (2019) and the Zero Pollution Action Plan (2021) provide strong political backing for mercury-free initiatives. Municipalities are increasingly pressured to align with

EU climate, waste, and health strategies. LIFE MERCURY-FREE results, (awareness campaigns, e-HUB, Roadmap) directly respond to these policy drivers, offering ready-made tools for compliance.

b. EU waste management and chemical policies: Legislation such as the Waste Framework Directive (2008/98/EC, amended in 2018/851) and the implementation of the Minamata Convention on Mercury create a regulatory imperative for cities to manage hazardous waste responsibly. The project's outputs (e.g., manuals, training modules) give municipalities a cost-efficient way to meet these requirements.

c. Growing demand for mercury-free solutions: Citizens and NGOs are increasingly aware of the health hazards of mercury in household products (e.g., thermometers, fluorescent lamps, batteries). This awareness creates social demand for safer disposal practices. Municipalities that adopt project outputs can therefore demonstrate responsiveness to citizen concerns and strengthen public trust.

d. Multi-stakeholder momentum: The project piloted quadruple-helix cooperation, bringing together municipalities, academia, industry, and civil society. Once established, these networks tend to create their own momentum. Stakeholders involved in pilot cities (e.g., NGOs in Lviv, universities in Lodz, schools in Krakow) have already expressed interest in continuing collaboration.

4.2 Barriers

a. Financial constraints: The most significant barrier is the cost of establishing or expanding hazardous waste collection systems. While awareness campaigns are relatively inexpensive, infrastructure (e.g., collection points, treatment facilities) requires sustained funding. In Ukraine and other non-EU countries, limited municipal budgets constrain full replication.

b. Cultural and behavioral resistance: Even with awareness campaigns, many households continue to dispose of mercury-containing products improperly, due to convenience or lack of trust in municipal systems. Changing behavior

requires long-term engagement, beyond the life of a single project.

c. Regulatory gaps in non-EU contexts: In countries not yet fully aligned with EU standards (Ukraine, Moldova, Belarus), national legislation on mercury is weaker. Without strong enforcement, municipalities may lack incentives to prioritize mercury management. This undermines replication unless supported by external funding or EU neighborhood programs.

d. Uneven institutional capacity: Some municipalities, especially smaller ones, may lack dedicated staff or departments to implement specialized hazardous waste initiatives. Without external technical assistance, they may struggle to operationalize the project's tools, even when motivated.

e. Competing policy priorities: In times of crisis, economic downturn, war (as in Ukraine), or public health emergencies, municipalities may deprioritize environmental initiatives in favor of urgent social or security needs. This context can delay or disrupt replication.

4.3 Enablers

a. LIFE Programme network: The LIFE Programme creates a supportive ecosystem for replication. Project partners can build synergies with other LIFE projects (on hazardous waste, chemicals, or circular economy), accessing shared platforms, funding opportunities, and dissemination channels.

b. NGOs and grassroots movements: Environmental NGOs are powerful enablers of replication. They can operate independently of municipal budgets, mobilize volunteers, and maintain citizen engagement. ~~In Ivano-Frankivsk, for example, NGOs like *Zero Waste Ivano-Frankivsk* have already started adapting project materials to new campaigns.~~

c. Municipal cooperation and twinning: European cities frequently engage in twinning agreements and transnational networks. LIFE MERCURY-FREE outputs can be easily embedded into such frameworks, enabling replication through established cooperation channels.

d. Existing waste management infrastructure: In EU cities like Krakow and

Lodz, hazardous waste management systems already exist. The project's tools (Roadmap, Guides) complement these infrastructures rather than creating them from scratch. This accelerates replication in contexts with pre-existing systems.

e. Digital platforms and open access: The LIFE e-HUB ensures that all project results remain digitally accessible. Its open-access format reduces barriers for new users: any municipality, NGO, or school can download manuals, access training modules, and join the Mercury-Free City Communities without needing formal project involvement.

4.4 Interactions Between Drivers, Barriers, and Enablers

The interplay of these factors determines replication outcomes. For example:

- In **EU pilot cities**, strong policy drivers and existing infrastructure outweigh financial barriers, making full replication feasible.
- In **non-EU partner cities**, barriers such as weak regulation and budget constraints are significant, but enablers like NGO engagement and EU neighborhood policies can compensate.
- In **smaller municipalities**, the most effective strategy is partial replication, starting with low-cost awareness campaigns supported by NGO networks.

4.5 Strategic Considerations

To maximize exploitation and replication, the project consortium will:

1. **Leverage policy drivers** by explicitly linking outputs to EU directives and funding frameworks, making them attractive to municipalities seeking compliance.
2. **Mitigate financial barriers** by promoting phased approaches (starting with awareness campaigns, then scaling to infrastructure).
3. **Address cultural resistance** through continuous education, particularly in schools, ensuring long-term behavioral change.
4. **Strengthen enablers** by maintaining active engagement of NGOs and

universities in post-project dissemination and by institutionalizing LIFE e-HUB as a permanent support mechanism.

Overall, the exploitation and replication of LIFE MERCURY-FREE results depend on a balance of **drivers** (EU policy, citizen demand, multi-stakeholder networks), **barriers** (finance, culture, regulation, competing priorities), and **enablers** (NGOs, LIFE networks, infrastructure, digital tools). By acknowledging these dynamics and strategically reinforcing enablers while addressing barriers, the project ensures that its outcomes remain relevant, transferable, and impactful across diverse European and neighboring contexts.

4.6 Risk and Mitigation Matrix

Factor	Potential Risk/Barrier	Impact on Exploitation/Replication	Mitigation/Enabling Measure
EU Green Deal & Policy Drivers	Risk of policy fatigue or shifting political priorities	Municipalities may deprioritize mercury issues if overshadowed by other EU priorities	Link project outputs to multiple EU agendas to maintain relevance
Financial Constraints	Lack of municipal budgets, especially in non-EU states	Limits ability to establish collection systems or run campaigns	Promote phased approaches, seek EU structural funds, mobilize NGOs for low-cost campaigns
Behavioral Resistance	Citizens continue discarding mercury waste improperly	Reduces impact of awareness campaigns and collection infrastructure	Embed education in schools, incentivize correct disposal, run sustained campaigns
Regulatory Gaps (non-EU)	Weak legislation or enforcement in Ukraine, Belarus, Moldova	No strong legal incentive for municipalities to adopt practices	Advocate for Minamata Convention implementation, engage ministries via NGO networks, leverage EU neighborhood programs
Institutional Capacity	Smaller municipalities	Replication limited to larger cities	Provide simple, step-by-step guides, offer

	lack staff to operationalize outputs		remote training via LIFE e-HUB, mobilize universities for technical support
Existing Waste Infrastructure	Uneven distribution across EU and non-EU cities	Some cities can adopt full models, others only partial	Encourage flexible replication pathways (full vs. partial), share success stories from cities with similar contexts
NGOs and Civil Society	Dependence on volunteer engagement may be unstable	Campaigns may lose continuity after project ends	Strengthen NGO role through Association of Mercury-Free Cities, provide small grants or recognition schemes
Digital Tools (e-HUB)	Risk of inactivity post-project if not updated	Platform loses relevance and users	Assign hosting to universities, involve students, secure NGO ownership for updates and outreach

By mapping risks against mitigation measures, LIFE MERCURY-FREE creates a realistic framework for sustaining and scaling results. The matrix highlights that while barriers such as funding and regulation are significant, they can be offset by smart use of enablers like NGOs, the LIFE e-HUB, and EU policy drivers. This structured approach allows municipalities and stakeholders to anticipate challenges and adopt tailored solutions, increasing the chances of long-term replication success.

5. Upscaling Opportunities

Upscaling is the natural continuation of replication. While replication ensures that results are transferred horizontally to other cities and stakeholders, upscaling focuses on expanding the scope, reach, and influence of the LIFE MERCURY-FREE model to achieve systemic impact. This section identifies the opportunities for mobilizing larger investments, engaging private actors, and

integrating project outcomes with wider environmental and health initiatives.

5.1 Potential for Mobilising Larger Investments and EU/National Funding

The LIFE MERCURY-FREE project was funded through the LIFE Programme, which specifically encourages projects with long-term sustainability and growth potential. Building on its tested results, several avenues for mobilising larger investments exist:

- **European Green Deal funding streams**: The project aligns closely with the Green Deal's Zero Pollution Action Plan and Chemicals Strategy for Sustainability. This alignment provides access to Horizon Europe, cohesion policy funds, and LIFE follow-up calls that prioritize hazardous waste reduction and behavioral change. Municipalities engaged in replication could leverage these funds to upgrade waste infrastructure or finance large-scale awareness campaigns.
- **National environmental funds**: Several partner states have national or regional environmental funds that could support continuation and scaling of mercury-free measures. For instance, Poland's National Fund for Environmental Protection and Water Management, or Italy's regional environmental agencies, could co-finance mercury collection systems or extend education campaigns.
- **Cross-border and Eastern Partnership financing**: With Ukraine and other non-EU states involved, upscaling opportunities also include EU Neighborhood Instrument (NDICI) funding, particularly for aligning hazardous waste management systems with EU standards. International donors active in Ukraine and Moldova (e.g., GEF, UNDP) are potential funders for extending the model.
- **Local budget mainstreaming**: Pilot cities demonstrated that many actions, such as awareness campaigns, marathons, or citizen hotlines, require modest funding once materials are prepared. Upscaling can therefore be achieved through embedding these measures into annual municipal budgets, ensuring

long-term continuity without reliance on external project funding.
By linking LIFE MERCURY-FREE outputs with these funding streams, cities can move from pilot initiatives to permanent, large-scale mercury-free policies.

5.2 Engagement of Private Actors (Waste Companies, Retailers)

Upscaling cannot rely solely on public funding. Private sector actors play a crucial role in sustaining and expanding the mercury-free agenda. The project identified several opportunities for engagement:

- **Waste management companies**: Operators of municipal waste systems are natural partners in scaling mercury-specific collection schemes. For example, in Poland and Portugal, private contractors already manage selective waste streams and could integrate mercury-specific fractions at minimal additional cost. Their involvement ensures professional handling and treatment of hazardous waste.
- **Retailers and producers**: Upscaling requires responsibility-sharing across the product life cycle. Large retailers of lighting products, thermometers, and batteries can support take-back schemes, provide collection points in shops, and co-finance awareness campaigns. Such extended producer responsibility (EPR) models are already embedded in EU waste directives and can be expanded with LIFE MERCURY-FREE practices.
- **Corporate social responsibility (CSR) initiatives**: Companies, especially those in the energy, health, and electronics sectors, are increasingly willing to support sustainability projects as part of CSR. Mercury-free campaigns present a visible, community-oriented opportunity for CSR investments. For instance, energy suppliers could fund mercury-free lighting replacement campaigns, while pharmacy chains could co-brand safe disposal drives for thermometers.
- **Start-ups and green innovators**: Upscaling can also create opportunities for new business models, such as mobile apps for locating collection points, gamification of recycling behavior, or specialized recycling technologies. By

opening the LIFE e-HUB to innovators, the project can serve as a marketplace for new solutions.

Engaging private actors ensures that mercury-free initiatives are embedded in market practices and not dependent solely on public budgets.

5.3 Integration with Broader Environmental and Health Initiatives

Mercury is just one of many hazardous substances that pose risks to citizens and ecosystems. A major upscaling opportunity lies in integrating LIFE MERCURY-FREE methodologies into broader environmental and public health frameworks.

- **EU Zero Pollution Action Plan**: Mercury-free cities directly contribute to the EU's objective of reducing pollution to levels no longer harmful to health and ecosystems. Positioning the project's outcomes within this framework increases visibility and ensures policy continuity.
- **Circular Economy Action Plan**: Upscaling can position mercury-free waste management within circular economy strategies, linking hazardous waste control to broader goals of resource efficiency, product design, and recycling.
- **Public health agendas**: The WHO and national ministries of health emphasize the risks of mercury exposure, particularly for vulnerable populations such as children and pregnant women. Integrating LIFE MERCURY-FREE outputs into health campaigns increases both reach and legitimacy. For example, Summer School modules could be adapted into training for health professionals and community doctors.
- **Education and youth programs**: Upscaling can be achieved by embedding mercury awareness into school curricula and university courses. Ministries of Education in partner states can integrate project materials into environmental education frameworks, ensuring intergenerational continuity.
- **Transferability to other pollutants**: Perhaps the most strategic opportunity for upscaling is using the LIFE MERCURY-FREE model (awareness campaigns, e-HUB, MLE), as a template for tackling other pollutants. Pilot experiences suggest that the same approach could be applied to

pharmaceuticals, e-waste, plastics, or pesticides. This transferability increases the long-term relevance of the project and provides opportunities for integration into national sustainability plans.

5.4 Strategic Partnerships for Upscaling

To fully exploit these opportunities, strategic partnerships are essential. The project already initiated several:

- With **municipal associations** in Poland and Ukraine to facilitate replication.
- With **universities and research institutes** to keep the e-HUB updated and integrate training modules into higher education.
- With **international NGOs** that can promote the "Mercury-Free City" label as a recognized certification for municipalities.

Future partnerships can expand to:

- **European networks** such as EUROCITIES or ICLEI, providing a ready channel to hundreds of municipalities.
- **International organizations** such as UNEP or WHO, embedding mercury-free actions in global health and environmental campaigns.
- **Private consortia** of retailers and recyclers to create cross-sector coalitions for mercury-free product management.

Upscaling opportunities for LIFE MERCURY-FREE are robust and diverse. By mobilising larger EU and national investments, engaging private actors across the product life cycle, and integrating outputs with health, education, and environmental agendas, the project can evolve from a successful pilot into a Europe-wide reference model. The creation of the NGO "Association of Mercury-Free Cities" ensures institutional capacity for driving this expansion, while the LIFE e-HUB provides the digital infrastructure.

In short, the project is not only replicable but also highly scalable, positioned to contribute to the EU Green Deal, strengthen national hazardous waste policies, and inspire broader community-based environmental action.

6. Monitoring and Sustainability

Ensuring the long-term impact of LIFE MERCURY-FREE requires robust mechanisms for monitoring how results are used after the project and how replication expands geographically and institutionally. Sustainability depends not only on continued availability of resources, but also on systematic tracking of adoption, impact measurement, and integration into broader policy frameworks.

6.1 Mechanisms for Monitoring Replication Post-Project

The consortium has designed a set of monitoring mechanisms to track exploitation and replication outcomes for at least five years beyond the project's closure. These mechanisms will rely on both digital tools (e.g., LIFE e-HUB) and institutional networks (e.g., the new NGO).

- **LIFE e-HUB as monitoring tool**: The e-HUB platform will serve as the primary digital space for reporting replication outcomes. Municipalities and NGOs will be encouraged to register new mercury-free initiatives, upload local case studies, and share policy documents. Built-in analytics (e.g., number of downloads, page visits, registered communities) will provide quantitative data on replication uptake.
- **Annual NGO-led reporting**: The *Association of Mercury-Free Cities*, established during the project, will coordinate an annual survey of member cities. This survey will collect data on: number of mercury-free initiatives implemented, population reached by campaigns, and policy measures adopted. Results will be published in an annual "Mercury-Free Cities Report" accessible to all stakeholders.
- **Alumni network of Summer Schools**: Participants of the Summer Schools (municipal officers, NGOs, educators) will be re-engaged through follow-up surveys and online workshops. Their feedback will provide qualitative insights on how training modules are being reused and adapted in different contexts.

- **Policy monitoring**: Universities involved in the consortium will track alignment of national and EU-level policies with project outcomes. For example, monitoring how the Roadmap recommendations are reflected in municipal waste management plans, or whether national hazardous waste strategies reference mercury reduction.

Together, these mechanisms ensure that replication is not left to chance but systematically monitored, reported, and analyzed.

6.2 Indicators for Exploitation and Replication Success

To evaluate progress, the consortium defined a set of measurable indicators. These indicators cover three dimensions: outreach, adoption, and policy impact.

Outreach indicators

- Number of municipalities registered on LIFE e-HUB after project end.
- Number of downloads or uses of Best Practice Guides and Manuals.
- Number of citizens reached by post-project awareness campaigns (via NGO reports).

Adoption indicators

- Number of municipalities adopting at least one component of the Mercury-Free City model.
- Number of schools/universities incorporating Summer School modules into curricula.
- Number of NGOs running mercury-free campaigns using project materials.
- Number of new collection points for mercury-containing products established in replication cities.

Policy impact indicators

- Number of local or regional policy documents referencing the Roadmap for Mercury-Free Cities.
- Inclusion of mercury-specific measures in national waste management or chemical safety strategies.
- EU-level references to project outcomes in Zero Pollution or Chemicals

Strategy reports.

These indicators will be monitored annually by the NGO and universities, with consolidated results shared through public reports and EU networks.

6.4 Sustainability Enablers

Several enablers strengthen the project's sustainability and ensure that monitoring is effective:

- **Digital infrastructure**: The LIFE e-HUB provides low-cost, scalable digital capacity for tracking replication. Hosting at universities guarantees technical continuity.
- **Community ownership**: Municipalities and NGOs already involved in the project have expressed willingness to continue contributing, ensuring that monitoring does not rely solely on the consortium.
- **Policy alignment**: Because outputs are linked to EU directives (Waste Framework Directive, Minamata Convention), municipalities have legal and policy incentives to continue monitoring mercury-free initiatives.
- **Visibility through EU networks**: The consortium will ensure that annual monitoring results are shared with EUROCITIES, ICLEI, and LIFE platforms, maximizing visibility and peer pressure for sustainability.

Overall, the sustainability of LIFE MERCURY-FREE rests on a strong monitoring system that combines digital tools, institutional structures, and policy alignment. Indicators ensure accountability and measure progress, while the After-LIFE Plan provides the framework for institutional, financial, and knowledge continuity. By embedding results in municipal budgets, NGO activities, and EU policy frameworks, the project ensures that its impact will extend far beyond its three-year duration. The monitoring and sustainability strategy thus transforms LIFE MERCURY-FREE from a time-bound project into a long-term driver of mercury-free cities, supporting both replication and upscaling across Europe and its neighboring regions.

7. Conclusions

The LIFE MERCURY-FREE project has demonstrated that reducing mercury in cities is both achievable and scalable when municipalities, NGOs, educational institutions, and citizens are mobilized around a shared goal. Through innovative tools such as the LIFE e-HUB, the Roadmap for Mercury-Free Cities, Summer School training modules, and the Mutual Learning Exercises, the project has created a coherent package of knowledge, practices, and governance structures. These outputs form the backbone of the Exploitation and Replication Plan. In summary, LIFE MERCURY-FREE has evolved from a project into a movement. With the structures now in place, the next phase is about scaling, institutionalizing, and sustaining mercury-free cities across Europe and its neighboring regions.