NET ZERO CITIES

EU MISSION PLATFORM | CLIMATE NEUTRAL AND SMART CITIES

# CCC HIGHLIGHTS

# CO-BENEFITS AND INDICATORS


## SUMMARY

As of May 2025, the EU Mission Label has been awarded to 92 cities, marking significant progress toward the EU's goal of achieving 100 climate-neutral and smart cities by 2030. The Label recognises each city's commitment to achieving climate neutrality by 2030, as outlined in their respective Climate City Contracts (CCCs). This factsheet, part of a wider series titled "CCC Highlights", explores the **co-benefits** labelled cities used to build their climate neutrality narrative beyond GHG emissions reductions and the **indicators** cities selected to evaluate the impact of their transitions.

The analysis is structured in three steps. **First**, we define the co-benefits and impact indicators within the Cities Mission framework and provide initial reflections on the analytical approaches used. **Second**, we present findings from the review of all 92 labelled Climate City Contracts (CCCs) to date. This step examines which co-benefits are referenced in cities' Commitments Documents. It compares them with the impact indicators selected in the Monitoring, Evaluation, and Learning (MEL) modules of their Action Plans. The goal is to assess the **coherence between the political framing of co-benefits** in the Commitments Documents and their **operationalisation** through monitoring and assessment in the Action Plans. **Finally**, we share insights from a qualitative review of the textual components of the CCCs, highlighting recurring barriers and opportunities in co-benefit quantification, and outlining next steps for cities.


## MAIN TAKEAWAYS

• All 92 cities that received a Mission Label as of May 2025 leveraged **co-benefits** in their CCC Commitments, **reframing climate neutrality targets beyond GHG emissions** reductions and using them to strengthen the political case for climate action. However, **monitoring remains limited:** only about three-quarters of these cities provided indicators of impacts other than GHG emissions in their Action Plans.

• **Health and economic benefits dominate cities' narratives.** While Commitments Documents acknowledge a broad range of co-benefits, the most sustained and frequently referenced arguments focus on improvements to public health, particularly **air quality,** and economic gains such as **job creation and financial savings.**

• Cities primarily monitor the co-benefits they emphasise in their Commitments Documents, particularly health, energy efficiency, and urban liveability. However, **significant gaps remain: economic, social, and biodiversity-related benefits are less consistently tracked,** highlighting the need for a more systematic and comprehensive approach to co-benefit monitoring.

• **Biodiversity** and **climate resilience** are the **least represented** co-benefits in cities' narratives. Biodiversity is framed mainly through broad themes of **nature conservation and overall species increase,** with little detail on specific benefits. Climate resilience is mainly approached through **mitigation,** focusing on reducing energy poverty and dependence on imported fossil fuels. **Adaptation benefits remain underrepresented.**

• **C**ity indicators are heavily concentrated in a few NetZeroCities Impact Indicator categories, revealing a **mismatch in granularity:** the current NetZeroCities framework does not fully reflect the more detailed measurement practices adopted by cities.

• While city action portfolios broadly align with the prioritisation of GHG emissions reductions, the selection of impact indicators often does not. **Many indicators are linked to lower-priority actions,** and this misalignment between action prioritisation and impact reporting can **weaken the case for climate action,** particularly when communicating with funders or the public.

• Cities face **systemic challenges** in quantifying co-benefits. These include data gaps, valuation uncertainty, difficulties in impact attribution, and risks of double-counting. At the same time, cities are increasingly **exploring the monetisation of co-benefits** to strengthen investment cases, attract private sector engagement, and optimise the use of public funding.

## 1. NETZEROCITIES IMPACT FRAMEWORK

As part of the Climate City Contract process, cities are encouraged to adopt an overarching 'Theory of Change' to their transition to climate neutrality. 'Theory of Change' is a framework by which certain desired outcomes are created through 'Impact pathways': essentially, a comprehensive description of how and why a desired change is expected to happen in a particular context. With the context being the emissions domains or sectoral action fields, cities can create change through the activation of all systemic levers and co-create a societal narrative to inform the selection and definition of desired outcomes. Impact indicators help monitor, evaluate, and learn from the pathways, at action and at portfolio scale. Learning is then fed back to refinement of all the elements of the Theory of Change.

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A comprehensive and coherent set of impact indicators at both action and portfolio scale supports cities in enhancing their societal narrative and building public support, supporting co-ownership of the transition across stakeholders, mobilising investment, and guiding policy development.

Co-benefits refer to the additional and beneficial impacts that arise from implementing climate mitigation strategies with the primary goal of reducing GHG emissions. For instance, measures aimed at curbing greenhouse gas emissions from burning fossil fuels not only help mitigate global warming but also lead to improved air quality, which in turn fosters better public health outcomes. Thus, co-benefits highlight the multifaceted gains that accompany climate action, making them a crucial consideration in environmental policy and investment decisions. Co-benefits manifest across sectors, enhancing the overall appeal of climate action, but this also poses challenges, for example, the attribution and equal distribution.

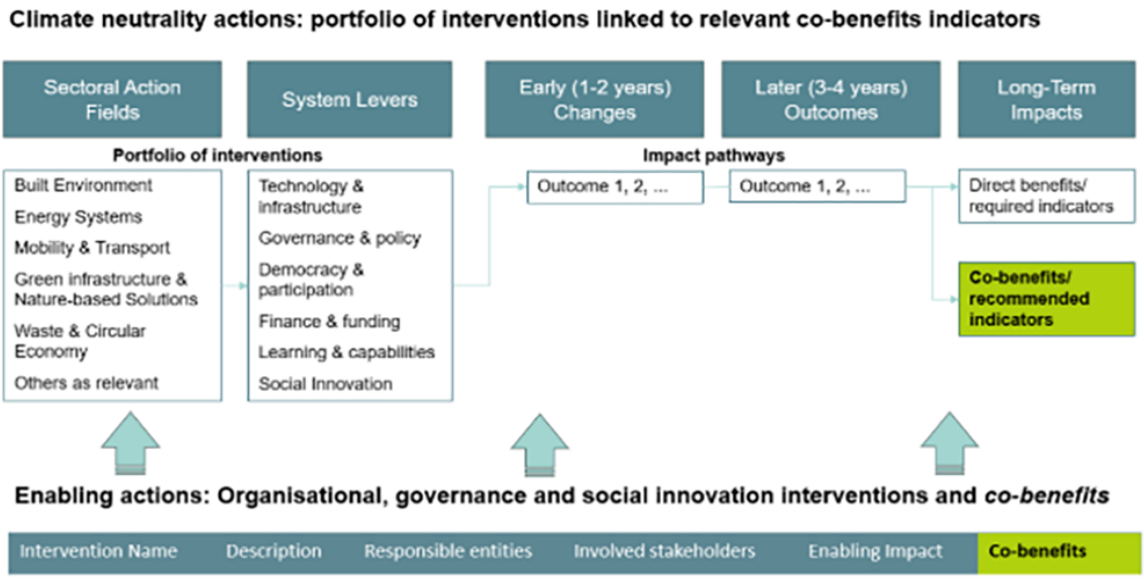


*Figure 1. Key data provided in Climate City Contracts on co-benefits and indicators*

## 2. THE ANALYTICAL FRAMEWORK

CCCs consist of three documents: a Commitments Document, an Action Plan, and an Investment Plan. For this analysis, we extracted **co-benefits** leveraged by cities in their **CCC Commitments Documents**, and **Impact indicators** and their metadata provided by cities in the Monitoring, Evaluation, and Learning (MEL) sections of their **CCC Action Plans**. Co-benefits and indicators used by cities in their Investment Plans are outside the scope of this document but could be added in a future version.

Our aim is to extract, analyse, and compare the following:

- Which co-benefits cities are focusing on to support their narrative - by extracting these from CCC Commitments,
- Which impact indicators cities are prioritising (beyond GHG emissions reduction) for Monitoring, Evaluation, and Learning - by extracting these from CCC Action Plans,
- The coherence between cities targeted co-benefits and measured indicators.

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To extract data from the CCC Commitments Documents and Action Plans, we developed an analytical framework designed to map a broad range of co-benefits and link them to relevant impact indicators. Building on the existing NetZeroCities Solution Outliner co-benefits list, we applied a **snowball approach** to expand and structure the framework. The resulting taxonomy consists of **6 main categories and 33 subcategories** (see Annex 1). Subcategories were further distinguished between **20 direct co-benefits**, and **12 indirect activities**, which represent actions that cities identify as essential steps leading to co-benefits. Finally, we mapped all co-benefit categories and subcategories to the NetZeroCities Comprehensive Indicator Framework (Annex 2). This analytical framework enabled us to systematically link the indicators reported in city Action Plans to the NetZeroCities indicator framework and, in turn, associate them with the relevant co-benefit categories.

### REFLECTION ON THE CO-BENEFITS TAXONOMY

When compared to the **NetZeroCities Solution Outliner co-benefits list**, which served as the starting point for data extraction, the final taxonomy shows some differences. These reflect both the variations between the original list and the emphasis cities place on specific co-benefits. Key differences include:

- **Biodiversity**: Of the six initial subcategories, only two were retained and were slightly reframed, namely **Nature Conservation and Biodiversity and Species and Pollinators Increase**. This is because references to biodiversity in CCC documents are often general, emphasising overall biodiversity increase or protection rather than detailed benefits.

- **Economy**: Cities rarely mention proximity economy, sharing economy, or reduced maintenance costs. Instead, new subcategories emerged, as cities expect CCC implementation to **enhance financial attractiveness** and **generate cost savings**, both for citizens (mainly through energy efficiency) and for the public sector (via digitalisation and infrastructure efficiency measures).

- **Health**: The original subcategory **"Healthier and More Attractive Lifestyle"** was not used because it overlapped with **Enhance Attractiveness of the City** and **Better Physical Activity of Individuals.** A new emerging subcategory was introduced to capture the attention cities place on **mental health improvements** from climate actions.

### REFLECTION ON THE MAPPING OF IMPACT INDICATORS

Below is the result of mapping every impact indicator in cities' Action Plans (Module B 3) to the most closely related NetZeroCities Indicator. The result is shown in **Figure 2**.

This exercise revealed a **mismatch between the granularity of city-level indicators and the NetZeroCities Indicator set.** Many NetZeroCities indicators function as broad "umbrella" categories encompassing a wide variety of city-specific indicators. To capture this diversity, **custom tags** were created to differentiate sub-categories of city indicators under the same NetZeroCities Indicator, as shown in the table below. Conversely, several NetZeroCities indicators were **too narrow** to be matched with any city indicator and were therefore excluded from the analysis.

Overall, **only half of the city indicators could be directly mapped** to NetZeroCities Indicators without requiring a customised tag to distinguish emerging sub-categories. This suggests that the current NetZeroCities Indicator set does not fully represent the measurement practices of cities and would benefit from a review.

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City-selected indicators are heavily concentrated in just two NetZeroCities Indicators: **Adoption of Key Climate Neutral Technologies (20%)**, and **Modal share of Green Transport Systems (16%).** Other frequently aligned indicators include: **Local RES Energy Production (8%), Citizen involvement in co-creation (5%), Energy use by fuel/energy type within city boundaries (5%), Green Spaces (4%),** and **Recycling rates (3%).**

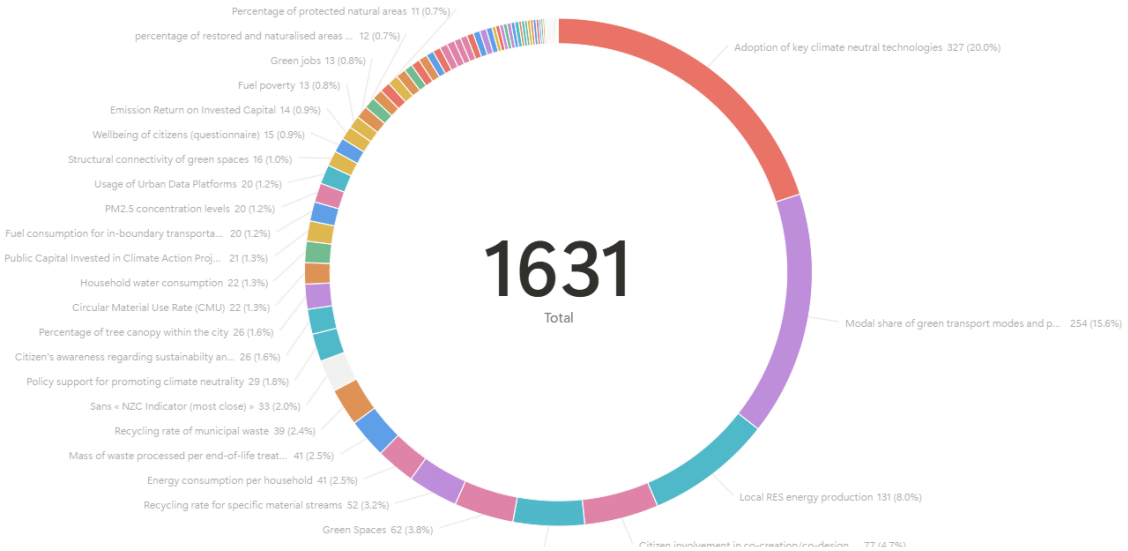


*Figure 2. Mapping of the NetZeroCities impact indicators against the city indicators*

Finally, we examined the relationship between selected indicators and climate actions across emissions domains (Figure 3). A major finding is that **portfolios of actions are generally coherent with emissions reduction priorities, but indicator selection is not**. Most indicators are associated with actions in sectors that are **not the most impactful** for emissions reductions. This **misalignment between action prioritisation and impact reporting** can weaken the case for action, particularly when communicating progress to funders or the public.

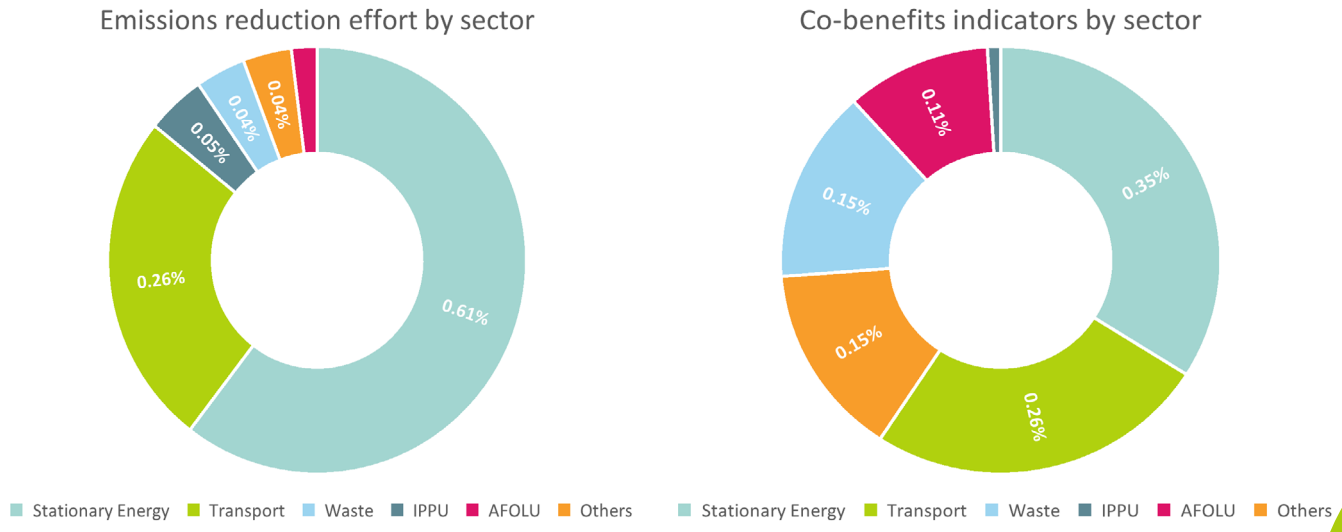


*Figure 3. Emissions reduction effort by sector (left) and co-benefits indicators by sector (right)*

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## 3. CO-BENEFITS AND RELATED IMPACT INDICATORS

All cities, in their **Commitments Documents**, explicitly acknowledged that the expected **impacts** of Climate City Contract (CCC) implementation extend **well beyond achieving climate neutrality and reducing greenhouse gas (GHG) emissions**. The depth of this discussion varied: some cities provided a concise list of anticipated co-benefits and key activities, often referring readers to the Action Plan for further details, while others developed a more elaborate narrative, emphasising the multiple, interconnected dimensions positively influenced by progress toward climate neutrality. From the analysis, **957 text segments** related to co-benefits were extracted from the Commitments Documents, averaging 10 co-benefit or key-activity segments per city.

In contrast, among the 92 cities that had received a Mission Label as of May 2025, **only about three-quarters reported impact indicators beyond GHG emissions in their Action Plans**. Moreover, cities did not always provide metadata or baseline values for the selected indicators, an element currently outside the scope of this analysis. Overall, 1631 individual city indicators were collected, with an average of 18 indicators per city.

When analysing the **Commitments Documents, health** and **economic co-benefits** emerge as the most frequently cited, representing **31%** and **26%** of all co-benefit segments, respectively. This pattern holds true not only in terms of emphasis given by cities to specific co-benefits but also in terms of breadth, meaning how widely these co-benefits are recognized across cities. In fact, **92%** of the documents mention health-related benefits, while **85%** refer to economic co-benefits at least once, confirming their central role in local climate action narratives. Looking at individual cases, the Commitments Documents from **Lemesos, Milan, Rzeszow,** and **Krakow** are particularly anchored in a strong health narrative, while **Kozani** and **Pécs** place greater emphasis on economic benefits.

The distribution of **indicators** used by cities in their **Action Plan** to monitor these co-benefits reveals a slightly different pattern. **Health** continues to lead with **33%** of all impact indicators, indicating a strong availability of measurable outcomes in this domain. Interestingly, **social co-benefits** rank second, accounting for **20%** of indicators despite representing only **17%** of segments in commitments documents and being mentioned at least once only by slightly more than half of the cities (54%). This suggests relatively good indicator coverage and moderate political use of social themes. In contrast, **economic co-benefits**, which are prominent in the policy discourse (**26%** of Commitments Documents segments), are **underrepresented in indicators (18%)**, highlighting a potential gap in use of measurement tools to track economic impacts.

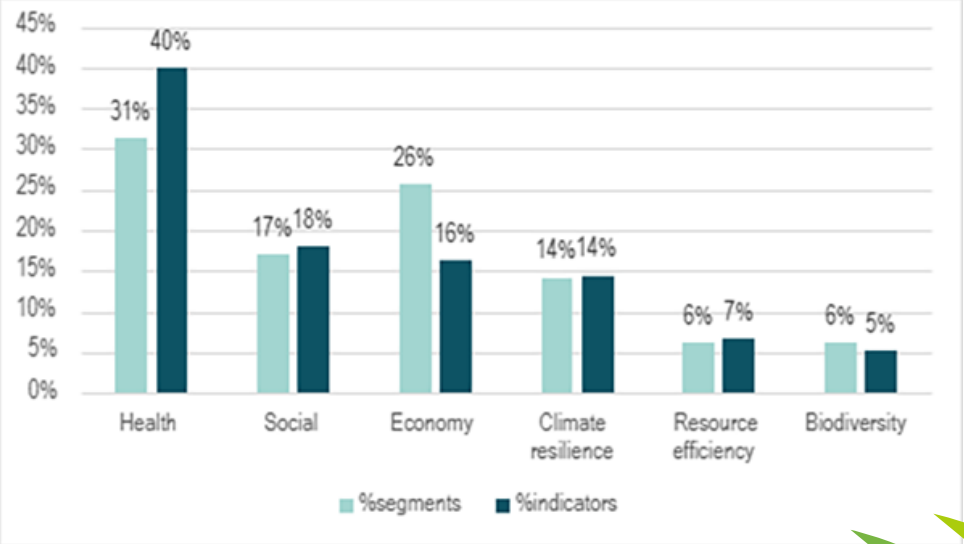


*Figure 4. Distribution of co-benefit segments and indicators across categories*

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When analysing the co-benefits subcategories, the results indicate that the most frequently mentioned key interventions relate to the **reduction of energy needs**, the **conservation and protection of nature and biodiversity**, and the **improvement of waste management** (Figure 5). These priorities are broadly aligned with the selection of indicators, as the most frequently mentioned interventions are also those linked to the greatest number of indicators, suggesting a consistency between policy emphasis and monitoring efforts.

The most cited co-benefit subcategories reflect the overall thematic pattern previously identified. **Health-related co-benefits** remain dominant, with high-ranking entries such as **improved air quality (9.7%), enhanced attractiveness of cities (7.9%),** and **better access to living areas (3.6%)**, all highlighting the focus on urban liveability (Figure 6). Additional subcategories, such as r**educed noise pollution, reduced road danger,** and **urban heat island mitigation**, contribute to a broader framing of climate action as a public health strategy.

**Economic benefits** also feature prominently, particularly through subcategories like **increased employment rate and jobs (8.6%), reduced costs and financial savings (6.4%),** and **boosting local business (5.3%)**, all of which underscore the economic stimulation potential of climate action. Further references to **enhancing financial attractiveness** and **supporting technological innovation** suggest that climate strategies are often framed as opportunities to strengthen local economic competitiveness.

Within the domain of **climate resilience**, a significant share of commitments emphasises increasing **access to clean, affordable, and secure energy.** This subcategory encompasses both efforts to **reduce energy poverty** and a large number of references to reducing **dependency on imported fossil fuels**. By lowering this dependency, cities aim to mitigate risks related to **energy price volatility** and **geopolitical instability,** thereby enhancing the long-term resilience of their energy systems. It is worth noting that most climate resilience co-benefits are linked to **mitigation**, while **adaptation benefits remain underrepresented**. Segments of the Commitments Documents that address reduced exposure to natural and climate hazards or enhanced stability of urban infrastructure account for only 5% of the total.

A comparison between the **distribution of commitment segments** and the **selection of indicators** reveals both **alignments and gaps** in the way cities monitor their climate co-benefits. Subcategories such as **reduce energy needs, improved air quality,** and **improve nature conservation** rank high in both metrics, suggesting that the areas receiving the most attention in strategic commitments are also those most thoroughly tracked with indicators. This alignment indicates that cities tend to monitor the co-benefits they prioritise in their climate action narratives, particularly in domains of **energy efficiency, health,** and **urban liveability**.

However, the comparison also exposes **under-monitored co-benefits**. Subcategories like **raised awareness/behavioural change, enhanced social cohesion,** and **species and pollinators increase** appear more frequently in commitments than in the indicator framework, reflecting a **monitoring gap** for social and biodiversity-related benefits. Conversely, certain co-benefits, such as **reduced noise pollution, improved access to living areas,** and **increased skill development**, are tracked with indicators more frequently than they are mentioned in commitments, suggesting either a broader indicator application or a **misalignment between policy emphasis and measurement focus**. Overall, this divergence highlights the need for a more systematic approach to co-benefit monitoring to ensure that the full range of intended impacts is consistently captured.

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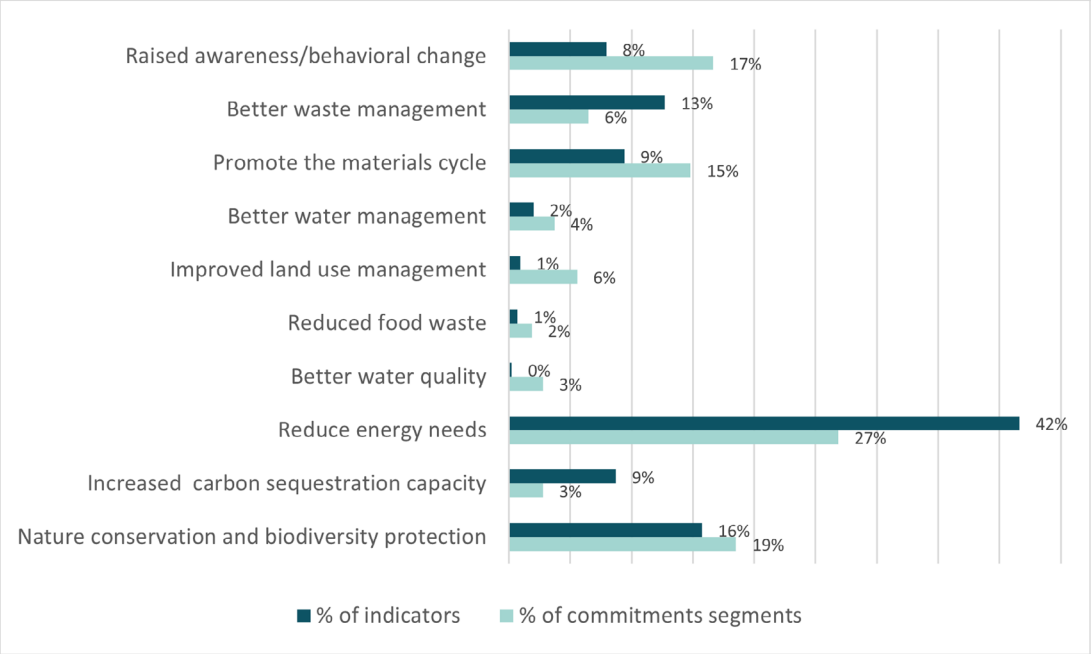


*Figure 5. Share of commitments segments and indicators for key activities leading to co-benefits*

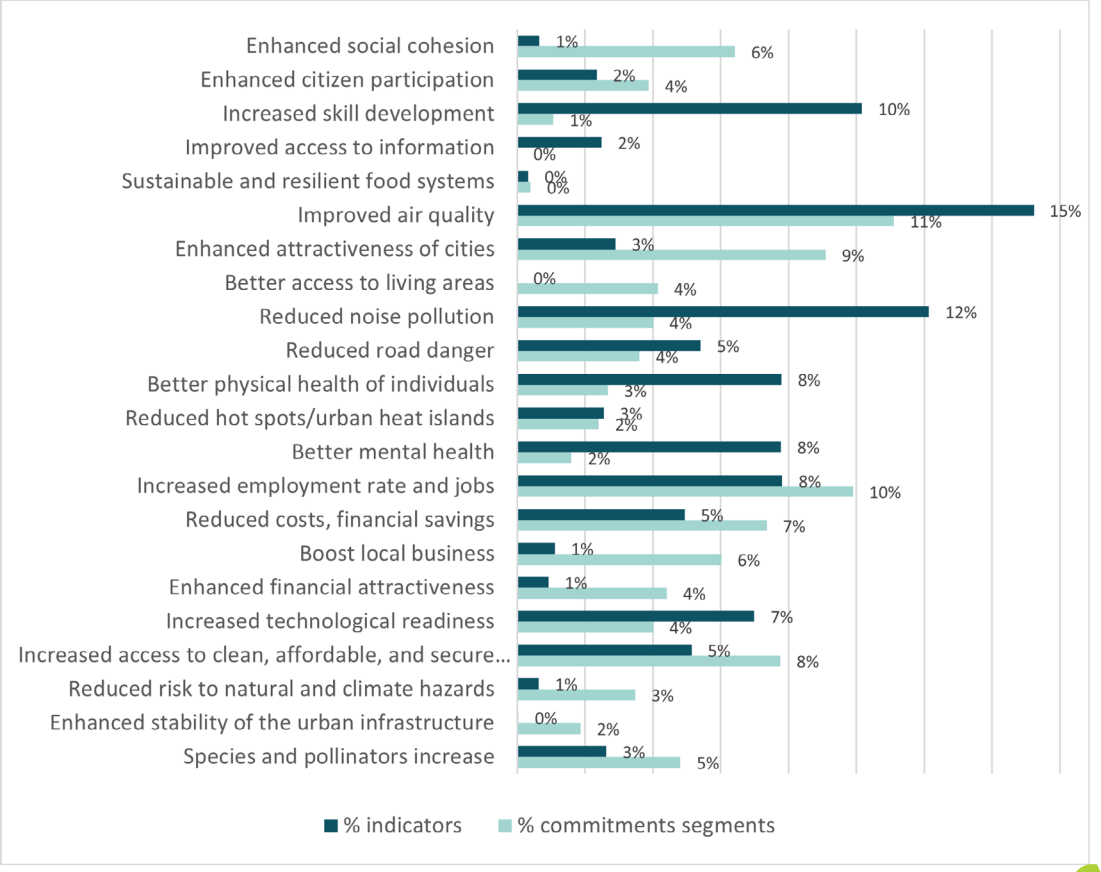


*Figure 6. Share of commitments segments and indicators for direct co-benefits*

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## 4. BARRIERS AND OPPORTUNITIES

Finally, we analysed the textual parts of CCCs to distil common barriers and opportunities linked to the quantification of co-benefits, as well as next steps.

### BARRIERS

Cities cite several challenges linked to the use of co-benefits and quantifiable indicators to support Action Plan implementation, predominantly linked to lack of data and methodologies as well as uncertain impact attribution. These are cross-cutting across sectors and levers of change, and need to be addressed in a systemic, collaborative way.

- **Lack of data and Valuation uncertainty:** The quantification of co-benefits incurs data gaps and valuation uncertainty, and needs to be addressed carefully and methodically, ensuring that processes are documented transparently and can be traced, allowing for iterative improvement towards more and more robust systems.

- **Overlaps or double-counting (attribution) and Equity and distributional concerns:** Co-benefits can be traced at project / individual action level, at pathway or sectoral level, and at city level. Several times, it is hard to estimate co-benefits at project scale, and uncertainty of impacts attribution are deemed unavoidable.

### OPPORTUNITIES

Most cities cite improvements in their monitoring, evaluation, and learning (MEL) plans as a next step for the upcoming iterations of their CCCs. Specifically, establishing clear objectives (aligned with the overall goals of the city's CCC) and including milestones and specific, measurable key performance indicators (KPIs) to track progress toward each objective; then, providing a structured approach including:

- **Data collection and management** mechanisms, including identifying sources of data relevant to the project's indicators and establishing systems for data generation, storage, and analysis.

- **Evaluation and visualisation** to assess progress and impact against objectives, including documentation and communication components and regular reporting to stakeholders about the project's progress and outcomes, ensuring transparency to maintain accountability and building trust.

- **Learning and adaptive management** to adapt and improve the plan based on insights gained from the process, considering and incorporating stakeholder and wider community feedback into ongoing project management and future planning, as well as to identify lessons learned and best practices for future replication or upscaling.

For all these purposes, the development of **digital dashboards and smart interfaces** and related educational and awareness-raising programmes is recognised as a priority.

**Cities are increasingly looking into the monetisation of co-benefits of climate action to support investment cases at both project and portfolio scale, incentivising the private sector, and prioritising the use of public funding.**

Monetising the co-benefits of climate action is both timely and complex. It goes beyond carbon pricing or credits to assign value to the additional positive effects that climate initiatives bring. Beyond voluntary contributions and impact investment, companies that report on Environmental, Societal, and Governance (ESG) indicators in line with the new Directive on Corporate Sustainability Reporting (CSRD) have an interest in this type of data. Some cities are leveraging co-benefits for portfolio financing through climate funds, others are using platforms for crowdfunding. Verification of impacts is a growing concern and area for development.

Cities wish to adopt more **shared and standardised approaches.** This would make monitoring, reporting, and verification (MRV), target setting and benchmarking, as well as scaling and replication of models easier, on the other hand it might reduce the opportunity to learn from novel and innovative concepts. A hybrid approach by which cities increasingly align with specific standards and existing methodologies, while at the same time keep developing individual or customised approaches tailored to the local needs and realities might be ideal.

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**Layout**: LGI Sustainable Innovation

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## ANNEX 1 CO-BENEFITS TAXONOMY

| Categories | Subcategories | Type | N° of linked NetZeroCities indicators |
|---|---|---|---|
| Biodiversity | Nature conservation and biodiversity protection | Activity | 10 |
| | Species and pollinators increase | Co-benefit | 5 |
| Economy | Boost local business | Co-benefit | 7 |
| | Increased employment rate and jobs | Co-benefit | 11 |
| | Increased technological readiness | Co-benefit | 5 |
| | Reduced costs, financial savings | Co-benefit | 12 |
| | Enhanced financial attractiveness | Co-benefit | 6 |
| Social | Enhanced citizen participation | Co-benefit | 8 |
| | Enhanced social cohesion | Co-benefit | 8 |
| | Improved access to information | Co-benefit | 9 |
| | Increased skill development | Co-benefit | 15 |
| | Raised awareness/behavioral change | Activity | 2 |
| Health | Better access to living areas | Co-benefit | 1 |
| | Better mental health | Co-benefit | 8 |
| | Better physical health of individuals | Co-benefit | 16 |
| | Enhanced attractiveness of cities | Co-benefit | 11 |
| | Improved air quality | Co-benefit | 10 |
| | Reduced hot spots/urban heat islands | Co-benefit | 8 |
| | Reduced noise pollution | Co-benefit | 4 |
| | Reduced road danger | Co-benefit | 3 |

| | | | |
|---|---|---|---|
| Resource efficiency | Better waste management | Activity | 6 |
| | Better water management | Activity | 3 |
| | Better water quality | Activity | 1 |
| | Improved land use management | Activity | 3 |
| | Promote the materials cycle | Activity | 6 |
| | Reduced food waste | Activity | 1 |
| | Sustainable and resilient food systems | Co-benefit | 2 |
| Climate resilience | Enhanced stability of the urban infrastructure | Co-benefit | 5 |
| | Increased carbon sequestration capacity | Activity | 6 |
| | Increased access to clean, affordable, and secure energy | Co-benefit | 6 |
| | Reduce energy needs | Activity | 10 |
| | Reduced risk to natural and climate hazards | Co-benefit | 3 |

## ANNEX 2 MAPPING OF IMPACT INDICATORS AND CO-BENEFITS

| Type | SOL Co-B... | Updated SOL Co-Benefit Level 3 | NZC Indicator Framework (D2.4.2) & SOL Co-Benefits map |
|---|---|---|---|
| Activity | Climate resi... | Reduce energy needs | Fuel consumption for in-boundary transportation per fuel type<br>Emission generation potential per unit of input/output for industrial processes within the city boundary<br>Emissions from non-energy product use<br>Local RES energy production<br>Energy Autonomy<br>Modal share of green transport modes and public transport<br>% of households and buildings with reduced energy consumption as a consequence of installing smart energy metres<br>% of municipal buildings equipped with building energy management systems<br>Energy use by fuel/energy type within city boundary<br>Energy consumption per household |
| Co-Benefit | Climate resi... | Increased access to clean, affordable, and secure energy | Fuel consumption for in-boundary transportation per fuel type<br>Local RES energy production<br>Energy Autonomy<br>Transmission and distribution loss factor for grid supplied energy<br>Energy use by fuel/energy type within city boundary<br>Fuel poverty |
| Activity | Climate resi... | Increased carbon sequestration capacity | Amount of permanent sequestration of GHG within city boundary<br>Negative emissions through natural sinks<br>Green Spaces<br>Percentage of tree canopy within the city<br>percentage of restored and naturalised areas on public land within the city<br>Percentage of protected natural areas |
| Co-Benefit | Climate resi... | Reduced risk to natural and climate hazards | percentage of restored and naturalised areas on public land within the city<br>Percentage of protected natural areas<br>Urban Heat Island (UHI) Effect |
| Co-Benefit | Climate resi... | Enhanced stability of the urban infrastructure | |
| Co-Benefit | Health | Improved air quality | PM2.5 concentration levels<br>PM10 concentration levels<br>NO2 concentration levels<br>Green Spaces<br>Percentage of tree canopy within the city<br>Percentage of protected natural areas<br>percentage of restored and naturalised areas on public land within the city<br>Modal share of green transport modes and public transport<br>Fuel consumption for in-boundary transportation per fuel type |
| Co-Benefit | Health | Better physical health of individuals | PM2.5 concentration levels<br>PM10 concentration levels<br>NO2 concentration levels<br>% of population exposed to night-time noise (Lnight) >= 50 dB<br>% of the population exposed to average day-evening-night noise levels (Lden) ≥ 55 dB<br>Road Deaths<br>Traffic safety active modes<br>Urban Heat Island (UHI) Effect<br>Mean value of daily maximum temperature (TXX)<br>Mean value of daily minimum temperature (TNN)<br>+ 6 |
| Co-Benefit | Health | Better mental health | Mindfulness<br>Wellbeing of citizens (questionnaire)<br>Modal share of green transport modes and public transport<br>Green Spaces<br>Percentage of tree canopy within the city<br>Percentage of protected natural areas<br>% of population exposed to night-time noise (Lnight) >= 50 dB<br>Mean value of daily maximum temperature (TXX) |
| Co-Benefit | Health | Reduced noise pollution | % of population exposed to night-time noise (Lnight) >= 50 dB<br>% of the population exposed to average day-evening-night noise levels (Lden) ≥ 55 dB<br>Modal share of green transport modes and public transport |

| | | | |
|---|---|---|---|
| Co-Benefit | Health | Reduced road danger | Road Deaths, Traffic safety active modes, Modal share of green transport modes and public transport |
| Co-Benefit | Health | Enhanced attractiveness of cities | Urban Heat Island (UHI) Effect, Mean value of daily maximum temperature (TXX), Mean value of daily minimum temperature (TNN), Heatwave (HW) incidence, Wellbeing of citizens (questionnaire), Green Spaces, Quality of public spaces, Percentage of tree canopy within the city, percentage of restored and naturalised areas on public land within the city, Percentage of protected natural areas + 1 |
| Co-Benefit | Health | Reduced hot spots/urban heat islands | Urban Heat Island (UHI) Effect, Mean value of daily maximum temperature (TXX), Mean value of daily minimum temperature (TNN), Heatwave (HW) incidence, Green Spaces, Percentage of tree canopy within the city, percentage of restored and naturalised areas on public land within the city, Percentage of protected natural areas |
| Co-Benefit | Health | Better access to living areas | Affordability of housing |
| Co-Benefit | Social | Increased skill development | Research intensity, Green jobs, Youth unemployment rate, Adoption of key climate neutral technologies, Climate-Neutral City Start-ups, New businesses registered, Surviving number of new companies registered after year 3, Public Capital Invested in Climate Action Projects, Budget Assigned to Climate Action Projects, Capital Invested in Climate Action Projects per Capita + 5 |
| Co-Benefit | Social | Improved access to information | Openness of public participation processes, Citizen involvement in co-creation/co-design of climate neutrality actions, % of city services available online, Improvement in online government services, Business-to-government (B2G) data sharing, Usage of Urban Data Platforms, User Satisfaction with Urban Data Platforms, Research intensity, Inclusion of different social groups |
| Co-Benefit | Social | Enhanced citizen participation | Energy use by fuel/energy type within city boundary, Inclusion of different social groups, Pro-environmental identity, Openness of public participation processes, Empowerment and Inclusion – Inclusion and Collaboration, Funding for Social Innovation initiatives for climate neutrality, Skills and Capacity Building – Social Innovation Experts, Voter participation |
| Activity | Social | Raised awareness/behavioral change | Energy use by fuel/energy type within city boundary, Citizen's awareness regarding sustainability and the environment |
| Co-Benefit | Social | Enhanced social cohesion | Inclusion of different social groups, Openness of public participation processes, Empowerment and Inclusion – Inclusion and Collaboration, Funding for Social Innovation initiatives for climate neutrality, Skills and Capacity Building – Social Innovation Experts, Quality of public spaces, Voter participation, Affordability of housing |
| Co-Benefit | Economy | Increased employment rate and jobs | Green jobs, Youth unemployment rate, Gross Domestic Product, Climate-Neutral City Start-ups, New businesses registered, Surviving number of new companies registered after year 3, Public Capital Invested in Climate Action Projects, Budget Assigned to Climate Action Projects, Capital Invested in Climate Action Projects per Capita, Private Capital Invested in Climate Action Projects + 1 |
| Co-Benefit | Economy | Increased technological readiness | Research intensity, Adoption of key climate neutral technologies, Climate-Neutral City Start-ups, New businesses registered, Surviving number of new companies registered after year 3 |
| Co-Benefit | Economy | Reduced costs, financial savings | Local RES energy production, Citizen involvement in co-creation/co-design of climate neutrality actions, Energy consumption per household, Household water consumption, Fuel consumption for in-boundary transportation per fuel type, Fuel poverty, Energy Autonomy, Transmission and distribution loss factor for grid supplied energy, % of households and buildings with reduced water consumption as a consequence of installing smart water metres, % of households and buildings with reduced energy consumption as a consequence of installing smart energy metres + 2 |
| Co-Benefit | Economy | Boost local business | Local food production, Surviving number of new companies registered after year 3, Gross Domestic Product, Capital Invested in Climate Action Projects per Capita, Green jobs, Climate-Neutral City Start-ups, Public Capital Invested in Climate Action Projects |
| Co-Benefit | Economy | Enhanced financial attractiveness | Public Capital Invested in Climate Action Projects, New businesses registered, Capital Invested in Climate Action Projects per Capita, Emission Return on Invested Capital, Gross Domestic Product, GINI coefficient |
| Activity | Resource ef... | Better waste management | Mass of waste processed per end-of-life treatment type within city boundary, Mass of waste processed per end-of-life treatment type outside city boundary, Recycling rate of municipal waste, Recycling rate for specific material streams, Circular Material Use Rate (CMU), Resource Productivity |
| Activity | Resource ef... | Promote the materials cycle | Emission generation potential per unit of input/output for industrial processes within the city boundary, Emissions from non-energy product use, Recycling rate of municipal waste, Recycling rate for specific material streams, Circular Material Use Rate (CMU), Resource Productivity |
| Activity | Resource ef... | Better water management | % of households and buildings with reduced water consumption as a consequence of installing smart water metres, Household water consumption, % of urban wastewater meeting the UWWTD requirements |
| Co-Benefit | Resource ef... | Sustainable and resilient food systems | Local food production, Food waste volume |
| Activity | Resource ef... | Improved land use management | Net annual rate of change in carbon stocks per hectare of land, Growth rate of urbanized land, Brownfield use |
| Activity | Resource ef... | Reduced food waste | Food waste volume |
| Activity | Resource ef... | Better water quality | % of urban wastewater meeting the UWWTD requirements |
| Activity | Resource ef... | Improved soil health | |
| Activity | Biodiversity | Reduced ecological footprint | Mass of waste processed per end-of-life treatment type within city boundary, Mass of waste processed per end-of-life treatment type outside city boundary, Emission generation potential per unit of input/output for industrial processes within the city boundary, Emissions from non-energy product use, Local RES energy production, Citizen involvement in co-creation/co-design of climate neutrality actions, Growth rate of urbanized land, Brownfield use |
| Co-Benefit | Biodiversity | Species and pollinators increase | Structural connectivity of green spaces, Percentage of tree canopy within the city, Green Spaces, Percentage of protected natural areas, percentage of restored and naturalised areas on public land within the city |
| Activity | Biodiversity | Increased ecological connectivity | |

## ANNEX 3 CITY COHORTS

| First Cohort of Mission Label Cities (Label awarded in October 2023) | Second Cohort of Mission Label Cities (Label awarded in March 2024) | Third Cohort of Mission Label Cities (Label awarded in October 2024) | Fourth Cohort of Mission Label Cities (Label awarded in May 2025) |
|---|---|---|---|
| Sønderborg (Denmark)<br><br>Mannheim (Germany)<br><br>Madrid, Valencia, Valladolid, Vitoria-Gasteiz, Zaragoza (Spain)<br><br>Klagenfurt (Austria)<br><br>Cluj-Napoca (Romania)<br><br>Stockholm (Sweden) | Ioannina, Kalamata, Kozani, Thessaloniki (Greece)<br><br>Heidelberg (Germany)<br><br>Leuven (Belgium)<br><br>Espoo, Lahti, Lappeenranta, Tampere, Turku (Finland)<br><br>Barcelona, Seville (Spain)<br><br>Pécs (Hungary)<br><br>Malmö (Sweden)<br><br>Guimarães, Lisbon (Portugal)<br><br>Florence, Parma (Italy)<br><br>Marseille, Lyon (France)<br><br>Limassol (Cyprus)<br><br>Izmir (Türkiye) | Aachen, Münster (Germany)<br><br>Trikala (Greece)<br><br>Miskolc (Hungary)<br><br>Bologna, Bergamo, Milan, Prato, Turin (Italy)<br><br>Liepāja (Latvia)<br><br>The Hague (Netherlands)<br><br>Porto (Portugal)<br><br>Bucharest 2nd District, Suceava (Romania)<br><br>Ljubljana, Kranj (Slovenia)<br><br>Gothenburg, Umeå (Sweden) | Antwerp (Belgium), Gabrovo, Sofia (Bulgaria), Liberec (Czechia), Aarhus, Copenhagen (Denmark), Dresden, Leipzig (Germany), Cork, Dublin (Ireland), Athens (Greece), Bordeaux Metropole, Dijon Metropole, Dunkerque, Grenoble-Alpes Metropole, Nantes Metropole, Paris (France), Padova (Italy), Riga (Latvia), Taurage, Vilnius (Lithuania), Budapest (Hungary), Krakow, Łódź, Rzeszow, Warsaw, Wrocław (Poland), Velenje (Slovenia), Košice (Slovakia), Helsinki (Finland), Helsingborg, Lund (Sweden), Reykjavík (Iceland), Oslo, Trondheim, Stavanger (Norway), Istanbul (Türkiye), and Bristol, Glasgow (United Kingdom) |