

## Policy Brief

**To:** AMS Institute

**From:** Céline Camelot, Mirella Peri, Ritwik Srivastava, Sophie Tarimanishvili, Rose Mary Johnson

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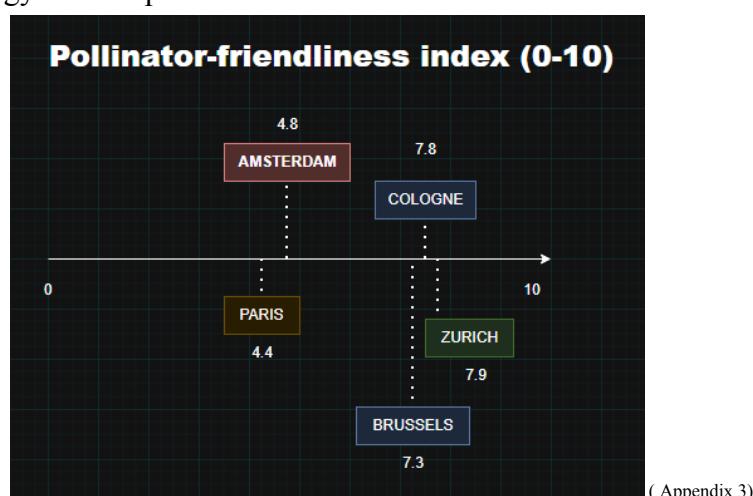
**Subject:** Rewilding Amsterdam: reconnecting urban spaces and insects through data-informed policy

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We recommend launching “*Rewilding Amsterdam: reconnecting urban spaces and insects through data-informed policy*”, a pilot program that translates real-time insect monitoring and citizen engagement into actionable policies. This will deliver measurable biodiversity gains within one district and provide a model for city-wide and European replication.

### Case

Amsterdam's insect populations are declining despite abundant green space and the city's existing biodiversity strategy. Current policies on mowing, planting and pesticide use are mostly static. At the same time, AI-powered insect monitoring systems and citizen science initiatives are already generating rich data, but these insights rarely reach policy decisions. The EU's new Nature Restoration Law and Amsterdam's own targets create an urgent need for demonstrable action. After looking for the most pollinator-friendly cities in Europe, understanding the measures taken there, and applying this knowledge to the case of Amsterdam, we recommend the following solutions to bridge the gap between the existing data and technology and the policies of Amsterdam.



### Recommendations

#### *Data through community engagement for connection zones*

According to AMS Institute, existing AI technologies to monitor pollinator activity in Amsterdam are necessary to understand where the city needs to build solutions like connection zones or nature-friendly shores. However, the data acquired during this monitoring is currently not actively used to decide on such solutions. To connect these data and technologies to the policy-making process, there needs to be broader community support.

That's where our solution comes in. Making BioBlitz into a game solves the major issues in community driven monitoring efforts: many districts are over-sampled while many remain sparse, participation is not regular, and many participants quit after trying it once, and there is little incentive to participate long term. Our game approach turns these problems into strengths. Daily photo challenges with instant feedback help people take better pictures consistently. Making Amsterdam neighborhoods compete against each other ensures the whole city gets covered. Reward streaks keep people participating all year long, and a system of increasing rewards prevents people from losing interest. We propose an adaption to the proven reward model which benefitted the city of Copenhagen with CopenPay. This not only benefits citizens but also tourists by receiving restaurant discounts, bike rentals, and skip-the-line museum access for taking nature photos, while Amsterdam residents earn free public transport, chances to influence city decisions, and public recognition. Local businesses benefit by attracting more customers while supporting environmental goals.

This changes random hobby participation into a reliable system that runs itself. CopenPay proved that giving people immediate, valuable rewards increases good environmental behavior by 29%. When we apply this to nature monitoring, we get the steady, complete data collection that city planners need to make smart decisions about protecting urban wildlife. We have developed a very basic prototype for the same, which is accessible via: <https://pangea-biodiversity.netlify.app/>. (QR code in Appendix 2).

#### *Data informed AirBeeNBees*

To survive and thrive, pollinator species need different types of plants, including water plants along the shores in Amsterdam. The city already has several nature-friendly shores where our pollinator species can live well (See Appendix 1). The city also identified several potential locations for more nature-friendly shores. To simultaneously accelerate this process and make data-driven decisions, we recommend using temperature detection and AI to identify the best areas to create more nature-friendly shores. Areas where the water is of a warmer temperature are higher breeding areas and will also see more plants for pollinator species. Our recommendation is to regularly monitor the city-identified areas for water temperature and use AI models to take into account more factors that play a role in seeing higher pollinator activity.

We advise the city to collaborate with researchers during a time period of 1 year to attempt regular monitoring of water temperature. To fund this project we also recommend reinvesting 10.000 euros from the extra investments every year (p. 19, 2025) from collaboration with volunteers to collaborations with researchers like AMS Institute.

#### *Mandatory green infrastructure for new buildings*

Integrating green roofs and facades into all new construction projects helps to preserve biodiversity and urban climate resilience. Currently, the city provides subsidies for those who want to add a green roof to their building, however, we recommend a stricter policy. However, as previously seen in Zurich, we believe that Mandatory Green Coverage would

lead to more success. This means all new and renovated buildings must have a green roof or balcony facade. Prior to approval, building permit applications must then meet predetermined "greenness criteria" (for example, percentage of vegetative cover, native plant species, and ecological function). By following through with stricter policies on green roofs, the city will be able to show their commitment to increasing biodiversity in Amsterdam and sustainable objectives.

#### *Ecological park*

An ecological park (Evere-style) prioritises biodiversity while allowing low-impact public access under explicit guidelines. The property is divided into three zones: a core conservation area (high-value ecosystems) with limited access via designated routes or guided visits; a buffer with boardwalks, interpretation, and habitat restoration; and edge/recreation areas for benches, tiny lawns, and play, located away from sensitive zones. This example is taken from a successful initiative in Brussels where there is a lot of space for biodiversity to thrive. This means that visitors would stay on the trails and are not allowed to interact with the wildlife. We recommend the city to take after the successful example in Brussels and attempt to create a similar park in which Amsterdam biodiversity can grow again.

#### **Conclusion**

To solve the problem of the lack of data-informed policies to increase biodiversity, we recommend a gamified format of data collection to engage Amsterdam's population in the solution. Additionally, we advise the city to reinvest funds and collaborate with researchers who will collect data, to be able to make data informed decisions on the creation of new nature-friendly shores. Lastly, we urge the city to change its policies on green roofs in the city by making them mandatory for new buildings and for renovation projects and work on creating ecological gardens in Amsterdam.

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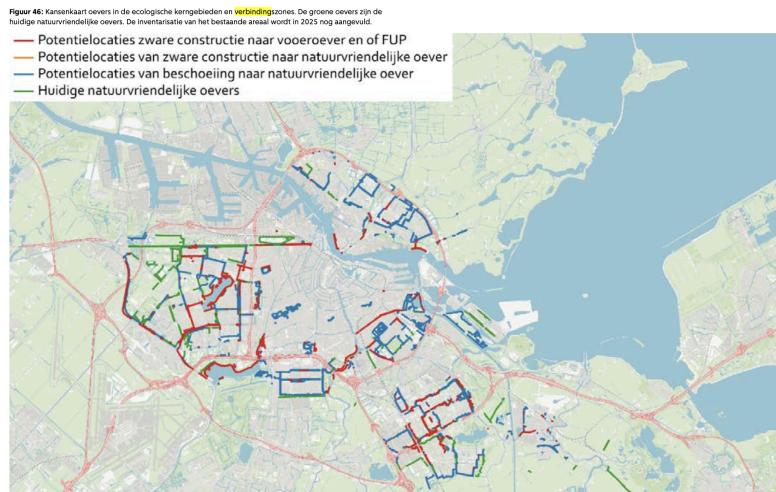
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## Appendix:

### 1. City map: Identified potential nature-friendly shores



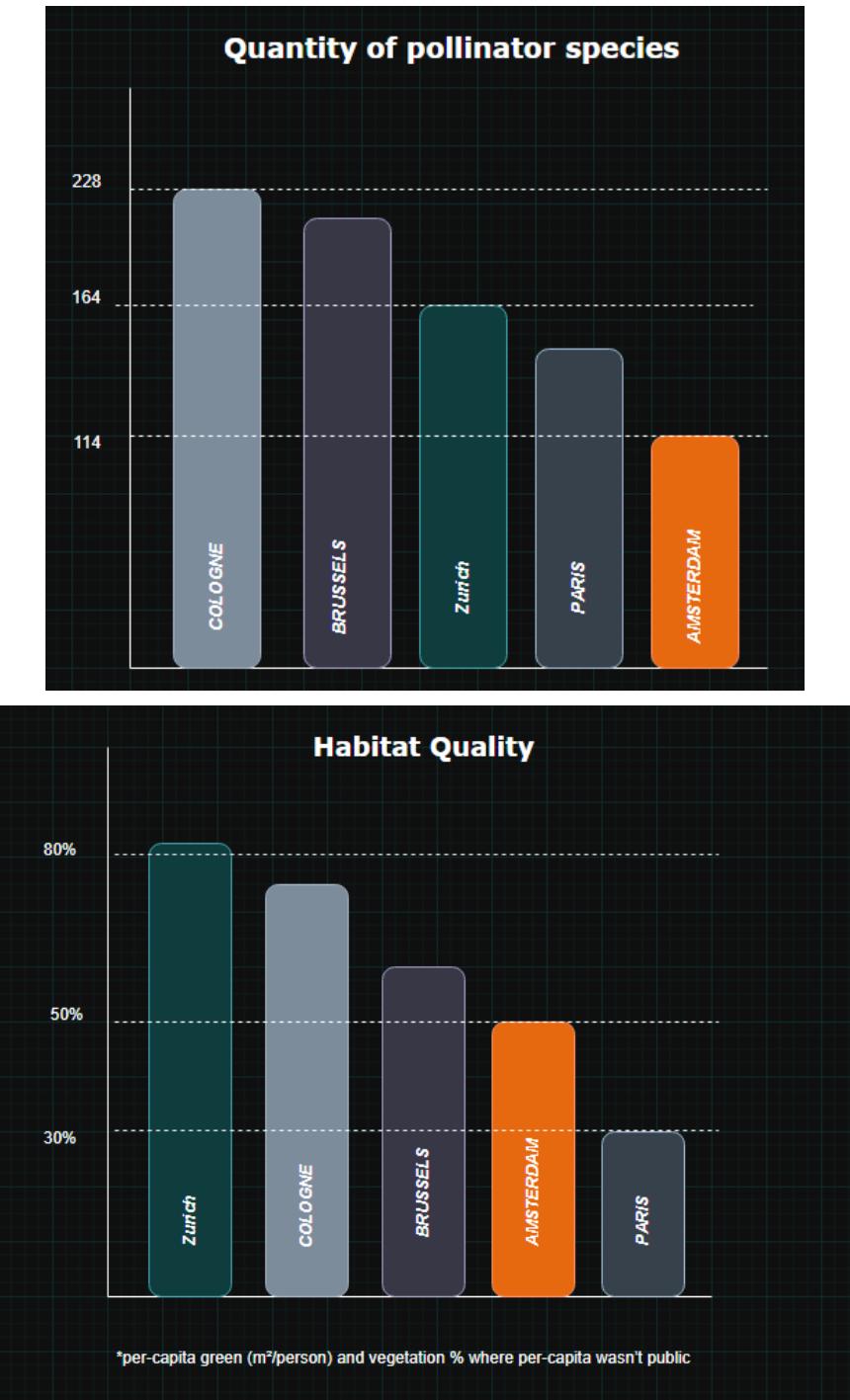
### 2. QR code for prototype

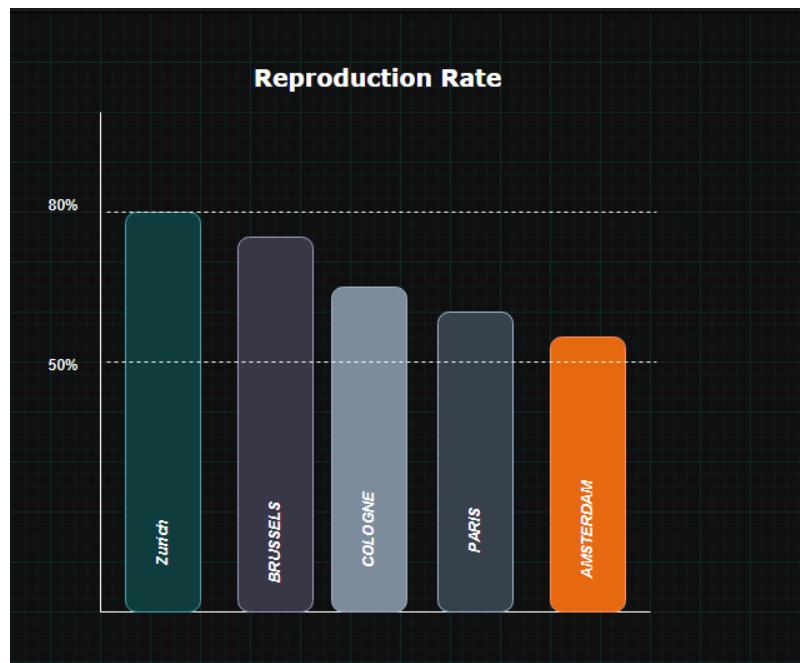


### 3. Pollinator Friendliness index

This was assigned based on three criteria. I) presence of wild bee species record. We focused specifically on Wild honey bees since they are most prioritized on the preservation list and are contested by ‘invasive’ honey bees. So the index of Wild bees gives us a good idea of how much the city prioritizes the preservation of pollinators. Additionally it is the most well documented pollinator species across all cities. II) Reproductive activity deduced from nesting evidence. III) Habitat- mean

accessible green per capita, and in some cases vegetation percentage where ( square meter/ person) data was not available.





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*Credits: Template partly adapted from materials by Will Atkinson (2023)*