

The Vienna Strategy for Pesticide Minimisation

Vienna City Administration, 2022



Foreword

Climate protection and biodiversity are closely linked with each other, especially in Vienna: Around one third of the city's area is protected grassland. Forests and meadows, parks and green areas are maintained sustainably and ecologically. Particular attention is paid to management which considers biodiversity. The greening of plant protection and the reduction of pesticide use play an important role here. Numerous studies have shown that pesticides have a wide range of negative effects on biodiversity – primarily on insect diversity and numbers, and subsequently on birds and animals feeding on insects, as well as on plants, water and soil.

In the "Vienna Strategy for Pesticide Minimisation", Vienna sets itself the goal of permanently and sustainably minimising the use of pesticides in the entire city area.

The City is thus taking on an important role model function: it is continuing its decades-long efforts to reduce pesticides whilst also considering other complementary aspects such as soil and water protection. Thus, this strategy includes the protection of the environment and the climate, as well as the protection of human health – all specially protected assets. This is a future-oriented step, in particular with regard to the developments on our planet!

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The Vienna Strategy for Pesticide Minimisation

Point of departure

Apart from climate protection, the protection and promotion of biodiversity are key ecological challenges for the coming decades.

Numerous scientific studies have shown that insect diversity and insect biomass have been declining in Europe and worldwide for decades. From an ecological point of view, insects are of great importance and fulfil numerous tasks – including many which are systemically relevant. According to the Austrian Federal Environment Agency, four out of five animal species in Austria are insects. They can be found at crucial points in the food web and provide important ecosystem services which are also indispensable for humans, such as pollination, pest control or the decomposition of organic substances. Current Central European studies show rates of decline in insect fauna of over 5% per year.¹ The German Ministry of the Environment points out that

longer-term studies, such as the Krefeld study, have shown drastic declines in flying insect biomass, at a rate of more than 75%, in recent decades.² The environmental protection organisation Global 2000 examined the situation of butterflies in Austria more closely and found that many both butterfly and moth species are endangered or even already extinct in Austria.^{3,4}

The causes of insect mortality are most likely multifactorial. Data on insects is generally incomplete. However, the drastic decline in insect numbers shows that the measures, tools and protection strategies are not yet sufficient to put a stop to insect mortality.¹ The condition of all unsealed surfaces, especially green spaces, as well as the use of biodiversity-friendly spaces in built-up areas, play an important role, as do the form of land use and cultivation and the use of pesticides. The increasing occurrence of extreme climatic events pose major challenges to populations of almost all species.¹

1 Umweltbundesamt (2020): Insekten in Österreich: <https://www.umweltbundesamt.at/fileadmin/site/publikationen/rep0739.pdf>

2 Deutsches Bundesministerium für Umwelt, Naturschutz und nukleare Sicherheit (BMU): <https://www.bmu.de/faq/was-steht-in-der-krefelder-studie/>

3 Global 2000 (2016–2018): Ausgeflattert I–III: <https://www.global2000.at/publikationen/ausgeflattert-schmetterlingssterben>

4 Global 2000: <https://www.global2000.at/sites/global/files/2020-Insektenatlas.pdf>

Pesticides⁵ can have multiple negative impacts on biodiversity: primarily on insect diversity and the number of insects, subsequently on pollination performed by insects, but also on birds and animals that feed on insects (e.g. hedgehogs and bats), plants, water bodies and soils and their wildlife.

For example, while insecticides are used against pests, many of them also harm beneficial insects such as bees and butterflies. Herbicides not only remove unwanted vegetation, but also ecologically important structures for insects and soil life. Both insecticides and herbicides can have fatal effects on aquatic life. As a further consequence, pesticides are also not completely harmless to human health.

The issues of biodiversity loss, insect mortality and pesticides have become very important to the public. They have also been receiving increasing media coverage for years. For example, surveys have shown that pesticides are among the topics that Austrians perceive strongly in the food sector^{6,7} and that are partly viewed with concern or as risk factors.

The greening of plant protection and the reduction of pesticide use are important components of biodiversity promotion and risk prevention for society as a whole in the areas of environmental protection and health. This strategy includes concrete local and regional opportunities to act in favour of protecting and fostering biodiversity. This would be an important step towards preserving health and the environment – because safeguarding biodiversity means protecting our livelihoods.

According to EU Directive 2009/128/EC establishing a framework for Community action to achieve the sustainable use of pesticides, risks to the environment and health from pesticide use should be reduced as far as possible and the use of pesticides in certain areas should be minimised. Preference shall be given to alternative, biological or mechanical methods of control.⁸

Goals and guiding principles

With the “Vienna Strategy for Pesticide Minimisation” and the measures associated with it, the City of Vienna sets itself the goal of permanently and sustainably minimising the use of pesticides throughout the city.

The city thus reaffirms its **self-commitment** as well as its **role model function**. It continues its decades-long efforts to reduce pesticides, in particular renouncing the use of synthetic chemical pesticides, expanding these in a comprehensive, **cooperative multi-stakeholder approach**.⁹ With this strategy and the programmes of measures linked to it, the City is committed to making full use of its **specific national competences** and other **opportunities to influence** the minimisation of pesticide use and the protection of biodiversity.

The **primary goal of the Vienna Strategy for Pesticide Minimisation** is to make a **significant contribution to the conservation, protection and promotion of biodiversity in Vienna** (incl. its spring protection areas). Furthermore, **soil and water**, the protection of **human health, the urban green spaces** and their **plant population** as well as **agricultural yields** are included in this strategy as **protected assets**.

In addition to plant protection products, biocides¹⁰ and their use are also considered in the context of this strategy and the measures linked to it.



5 The term “pesticides” includes chemicals, micro-organisms (including viruses) and (in Austria this also includes) beneficial organisms/macro-organisms which kill, drive away, inhibit the growth or reproduction of or scare away unwelcome or harmful organisms or disease vectors for humans, animals and plants

6 EFSA (2019): Eurobarometer Food Safety in the EU: https://www.efsa.europa.eu/sites/default/files/corporate_publications/files/eurobarometer19/country-factsheets/EB91.3_EFSA_fact_at_en.pdf

7 AGES (2018): Risk Barometer Environment & Health: <https://wissenaktuell.ages.at/risikobarometer-2018/>

8 DIRECTIVE 2009/128/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides: <https://eur-lex.europa.eu/legal-content/DE/TXT/PDF/?uri=CELEX:32009L0128>

9 For the definition: <https://www.wikiwand.com/en/Multistakeholder%20governance>

10 Biocides (derived from the ancient Greek βίος bios, German “life” and Latin caedere “to kill”) are chemicals or micro-organisms used in the non-agricultural sector to control pests (such as rats, insects, fungi, microbes), i.e. for example disinfectants, rat poisons or wood preservatives. Source: Wikipedia

Guiding principles are

- Reducing environmentally harmful substances, especially pesticides
- Protecting and strengthening biodiversity in the city
- Protecting human health
- Ecological design and maintenance of urban green spaces and provision of the population with near-natural recreational areas as a contribution to a high quality of life
- Protection of agricultural crops and yields within the framework of measures which are as ecological as possible, so as to contribute to the security of supply with regional, sustainable and healthy foodstuffs.
- Setting an example as a city administration and setting the tone for the private and commercial sectors
- Adherence to the precautionary principle and risk prevention

Occasion and embedding

The City of Vienna has been continuously taking steps to reduce pesticides since the 1980s. It has already comprehensively reduced the use of pesticides in its sphere of influence, replaced chemical synthetic pesticides with biological agents and alternative methods, and completely discontinued the use of agents of concern, such as glyphosate.

Since 2018, the topic of pesticide minimisation has been intensively discussed and worked on in Vienna on behalf of the Vienna Environmental and Nature Conservation Advisory Council. The City has therefore launched an **initiative for pesticide minimisation**, which numerous organisations belong to and whose tasks include both the critical discussion and the preparation for this strategy and the development of concrete programmes of measures and key measures.

The **Vienna Strategy for Pesticide Minimisation** is a significant milestone and an important step in the **implementation of the government programme of the Vienna Progress Coalition**, which aims to promote biodiversity and limit the use of pesticides as much as possible. It is embedded in the **Vienna Charter on Forests and Meadows**¹¹ as a key measure and is in line with the action plans identified there as well as with other **strategies and initiatives of the City** – for example in the areas of **nutrition**¹² or **health**.¹³

With its packages of measures and key actions, the **Vienna Strategy for Pesticide Minimisation** concretises, supplements and expands the **National Action Plan on the**

sustainable use of plant protection products. Furthermore, it contributes to the **implementation of the global Agenda 2030 and its Sustainable Development Goals (SDGs)**, which the City of Vienna is actively committed to.¹⁴ Furthermore, the City of Vienna is also committed to these issues internationally, for example within the framework of the **Organic Cities Network Europe** for ecological agriculture and a good supply of organic food for the population.¹⁵ The EU “Green Deal” as well as the “Farm to Fork Strategy” and the “Biodiversity Strategy” form a framework in a larger context.



Integrated programmes of measures

Synergies with other factors – or with the **design of green spaces of all kinds, but also of façades or roofs as green façades or green roofs**, as well as **management and maintenance measures** – are important for biodiversity. Insects, plants and animals need suitable habitats which should be as unaffected as possible by harmful chemicals.

The **Vienna Strategy for Pesticide Minimisation** and the key measures and action programmes linked to it form the basis for the sustainable minimisation of pesticide use¹⁶ in Vienna. The strategy and its measures reflect the awareness of these interactions and synergies as well as the **principles of Integrated Pest Management (IPM/IPS in German)**¹⁷ and its continuous development. The strategy and its implementation are based on the spirit of partnership and jointly supported solutions in the context of complex issues.

The **Vienna Strategy for Pesticide Minimisation** goes hand in hand with other city programmes for fostering biodiversity

11 Vienna Forest and Meadow Charter (2020): <https://www.digital.wienbibliothek.at/wbrup/download/pdf/3559553>

12 Vienna Food Action Plan: www.umweltschutz.wien.gv.at/nachhaltigkeit/wien-isst-gut.html

13 Vienna Health Targets 2025: <https://gesundheitsziele.wien.gv.at/site/ziele/>, e. g. <https://gesundheitsziele.wien.gv.at/site/ziele/ziel-8-lebensraum-stadt/>

14 See notes in the appendix – Pesticides and SDGs

15 Organic Cities Network Europe: <https://www.organic-cities.eu/>

and green space management, which are brought together in the Vienna **Forest and Meadow Charter**.

The City of Vienna has also been promoting healthy and sustainable nutrition for a long time with extensive programmes and initiatives, which have been included in the **Viennese Food Action Plan "Wien isst G.U.T."** since 2020. The Vienna Strategy for Pesticide Minimisation follows on from this because of its high relevance for an ecological Viennese urban agriculture.



In cooperations, especially with the Vienna Chamber of Agriculture, it uses specific **measures in the field of agriculture** to contribute to a sustainable urban food system, to a healthier, more sustainable diet for the Viennese population and to the continuous greening of Viennese agriculture.

Actors and areas of action

This strategy combines the City of Vienna's decades of experience in the field of pesticide reduction and ecological plant protection with an ambitious claim to continuous improvement in the entire province of Vienna. It is thus not only aimed at municipal scope for action and areas of the city itself. Apart from to the areas under the direct influence of the public sector, pesticide applications on private and commercially or agriculturally managed areas or by professional users are also relevant. The strategy defines the following areas of action:

- **Municipal and public areas, public enterprises** (of the City of Vienna as well as the federal government)
- **Professional users** (farmers, landscape gardeners, other users)
- **Private users and uses** (e.g. in allotment gardens, private

gardens, green and outdoor areas on company premises and in industrial estates, etc.).

For the **Vienna Strategy for Pesticide Minimisation**, work on **status surveys and options for action** was carried out in constructive dialogue and partnership with numerous stakeholders from these three areas of action.

Implementation, evaluation and progress monitoring

The working groups discussed reduction potentials for their respective areas, developed measures and jointly **identified** related **key measures**, which are summarised below across all areas. The **Vienna Strategy for Pesticide Minimisation** forms the **common framework** for its **implementation in partnership** as well as its **review and continuous further development**. The continuation of the **initiative for pesticide minimisation** and the long-term working groups initiated in this context form the basis for this.

The **evaluation and success monitoring of the strategy and its measures** is carried out within the framework of regular reports to the Vienna Environment and Nature Conservation Advisory Council.

Apart from the specific focus on reduction measures and their implementation, the monitoring of developments at the overall level and the successive improvement of data availability and information on pesticide use in Vienna are clear objectives of this strategy. In addition to the voluntary commitment of the City of Vienna and the cooperation with federal institutions, this also applies to the areas of "private users" and "professional users".

The aim is to ensure that the minimisation of pesticide use and the associated risk to the environment and human health in Vienna can be increasingly better understood and verified on the basis of suitable, robust data. For example, this concerns appropriate indicators for the monitoring and use of pesticides containing active substances of particular concern, especially if alternatives are available, as well as appropriate targets and objectives or the identification of trends for certain active substances.¹⁶

¹⁶ The idea of minimisation in this sense takes into account that pest control measures may be necessary in specific cases to protect crops or agricultural yields. However, in the sense of the IPM, preference should be given to non-chemical methods, the lowest possible application quantities and the selection of control methods with the least side effects and risks for the environment and humans

¹⁷ These are clearly defined in Annex III of EU Directive 2009/128/EC: <https://eur-lex.europa.eu/legal-content/DE/TXT/PDF/?uri=CELEX:32009L0128&from=DE>

¹⁸ See also Directive EC/2009/128 establishing a framework for Community action to achieve the sustainable use of pesticides and Vienna Plant Protection Products Act §10h. (1), (4), (5)

Descriptions of the fields of action and the status quo

MUNICIPAL AND PUBLIC AREAS, PUBLIC SECTOR COMPANIES

This concerns land under the administration of the City of Vienna and its enterprises and companies. Moreover, areas indirectly attributable to the City of Vienna as well as areas within the national borders which are under the administration of the federal government or its companies are also included. These fulfil a variety of functions: for example, they are used as public space, local recreation areas or habitats for plants and animals. "Non-cultivated land" where e. g. infrastructure for public services is located, also offers ecological leeway.

Apart from the fact that these areas are important for biodiversity, they are also significant elements in urban climate protection and climate change adaptation – from the "Vienna Green Belt" to the cooling effect of urban greenery and CO₂ capture in plants and soils. Their character and composition of these areas are just as diverse as their functions.

For example, the direct management of the City of Vienna and its companies includes parks and city forests, bodies of water, agricultural land, recreational facilities such as public outdoor pools or playgrounds, municipal facilities such as hospitals, schools and kindergartens, cemeteries, housing estates, as well as roadside greenery and railway embankments up to and including "non-cultivated land" such as railway tracks and stations, roads, market areas or industrial or commercial estates.



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Over 90 %¹⁹ of the areas under the direct management of the City of Vienna are not treated with pesticides. Moreover, the City of Vienna completely renounces the use of glyphosate.

The City of Vienna uses organic farming methods in its agricultural operations. Certain parks, railway tracks, track and roadside green areas are managed according to the principles of integrated plant protection, especially if certain occurrences make this a matter of urgency. These can take the shape of preventive measures, alternative measures and the preference of biological treatment alternatives. Plant protection products are used selectively in problem areas and in relation to the respective pest only.

In the areas directly managed by the City of Vienna, plant protection measures are carried out by the specialised departments of the City of Vienna – Parks and Gardens or Forestry and Agriculture. Furthermore, in addition to management measures, the City of Vienna actively accentuates the design of structures as well as plantings and landscape elements to promote biodiversity.²⁰

The City of Vienna has indirect influence within the framework of the land it leases through contractual arrangements. These areas include allotment gardens, arable land, commercial estates or meadows. Within the framework of the initiative, the options of exercising such indirect influence for the purpose of pesticide minimisation are being examined and developed by the City of Vienna and the relevant departments.

The Republic of Austria owns areas in the territory of the City of Vienna under its direct administration or under the administration of its companies. These are mainly areas of the Austrian Federal Gardens, the Federal Forests and the federal companies, e.g. the Austrian Federal Railways. The respective organisations have their own management concepts for these areas. They are involved in collaborative efforts on pesticide minimisation in Vienna in the working groups.

Track areas and track installations take a special position as the highest safety requirements apply here with regard to (undesired) vegetation; there is particular vegetation pressure on shunting areas as well as on kilometres of track running through open land or on railway embankments. Here, reduction methods such as mechanical control or reduced herbicide use by means of plant detection technology are applied. Wiener Linien, the transport utility provider, completely dispensed with pesticides since 2018.

Furthermore, invasive plants (neophytes) have special status if there is a need or legal obligation to combat them.²¹ The

¹⁹ Notes on the calculation/details regarding the statement: MA42

²⁰ Small-scale as well as large-scale – for example new parks in urban development areas, biodiversity-promoting revegetation of railway embankments operated by Wiener Linien, but also the revegetation of tree grates together with citizens

²¹ Federal Environmental Agency: Neobiota - International obligations: <https://www.neobiota-austria.at/internationale-verpflichtungen-1>

City of Vienna has drawn up its own management plans for this purpose. In case of invasive plants, it should be noted that control by pesticides is often not the main focus as it is usually neither sufficient nor effective.

Other special situations may arise due to pests which directly affect human health (as is the case with the caterpillars of the oak processionary moth) and where control is thus necessary. In particular, this applies to areas with intensive recreational use. Here, too, the principle applied says that ecologically compatible, gentle control methods or biological agents are to be given preference and risk assessment must be carried out.

PROFESSIONAL USERS (AGRICULTURE, GARDENERS, OTHER USERS)

The field of professional users includes both farmers and commercial landscape gardeners.

Agriculture

The city of Vienna has an impressive urban agriculture for a metropolis. In total, approx. 5,700 hectares, corresponding to around 14% of the federal province area, are farmed, 982 hectares of these by the City of Vienna itself. At farm level, this amounts to 645 agricultural holdings in Vienna (as of June 2021). Vienna's urban agriculture is distributed across the districts of Favoriten, Simmering, Döbling, Floridsdorf, Donaustadt and Liesing. Among the 645 Viennese farms are 179 garden vegetable farms, 170 are viticultural farms, 153 arable farms, 51 horticultural farms for flowers and ornamental plants, 18 livestock farms, 25 field vegetable farms, 12 fruit farms and 4 forestry operations. About 4 330 hectares of Vienna's 5 700 hectares of agricultural land are arable land. 382²² hectares are used for horticulture – mainly for vegetable production. Viennese wine is cultivated on an area of 637 hectares. As of June 2021, 30% of Vienna's agricultural holdings were organic farming operations (in terms of area, this corresponds to around 35%).²³

It is a declared goal of the city's policy to promote and further develop this diverse urban agriculture setting in collaboration with the Vienna Chamber of Agriculture, to continuously and to preserve it for the future. This includes a joint commitment of the city and the Vienna Chamber of Agriculture to reduce the use of pesticides and to increase the share of organic farms. This is also clearly expressed in the current government programme. In order to build on the success of the first Organic Action Programme, the City of Vienna and the Vienna Chamber of Agriculture are currently jointly revising it for 2022 and the following years. The second Organic Action Programme will promote both farms

switching to organic farming as well as investments in farms and marketing activities for organic products.

Depending on the type of management, agricultural land generally has a high potential in terms of biodiversity and as a CO₂ sink. This potential is strongly moderated by management practice, land structure (small-scale vs. large-scale) as well as the willingness to green agricultural land with biodiversity in mind and to promote such efforts. In large-scale agricultural structures, the use of marginal zones in the shape of flower strips or windbreaks is essential to accentuating biodiversity promotion.

For the City of Vienna, agricultural production is an important resource for high-quality regional food. For the farms themselves, food and plant production are the economic basis of life, and the protection of crops and harvests against pests is an essential economic factor. Areas used for agriculture and local recreation exist side by side on Vienna's urban fringes, something which has vividly been reflected in the wine-growing areas for a long time. But in other areas, too, agricultural land lies increasingly next to local recreation areas on a large scale as part of urban development, as exemplified by the Norbert Scheed Forest in the north-east of Vienna or in Ober- and Unterlaa in the south of Vienna. In this respect, there is close coexistence of agricultural areas, local recreation areas and residential areas in Vienna's outer districts, a particularity requiring special attention.

In Vienna's urban agriculture, the trend towards greening has been around for a long time; this is reflected in an increase in the number of organic farms and organically farmed areas. Measures of the Agri-environmental Programme for Environmentally Sound Agriculture (ÖPUL) have already been implemented on almost 80% of the total agricultural area (as of 2018). Vienna's farmers participated in the programmes of the food retail trade for the reduction



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²² The Vienna Chamber of Agriculture, Evaluation of the 2020 invoices issued for mandatory membership fees (as of 18 June 2021) and Vienna Agricultural Report 2017 of the Chamber of Agriculture

²³ Fact sheet on Viennese agriculture (as of 30 June 2021)

of plant protection agents. Pilot projects as well as educational events and information campaigns (e.g. on bee protection) are run by the Vienna Chamber of Agriculture and its institutions. The Chamber of Agriculture provides professional users with information on the occurrence of diseases and pests through a warning service.

As of June 2021, 35% of the total agricultural area was farmed organically. The further expansion and increasing strengthening of organic farming are declared goals of the City of Vienna and the Vienna Chamber of Agriculture. The City of Vienna's own agricultural operations are entirely organic. Within the framework of Bio Forschung Austria, the city operates an independent competence centre for organic agriculture, which, in addition to research projects, also offers specialist courses on topics such as soil or revegetation and the gardening advice centre of Vienna.²⁴ The apprenticeship and technical training centre of the Vienna Chamber of Agriculture (LFA) is updating its range of courses for future specialists and master gardeners.

Other professional users, such as landscape gardeners

The commercial landscape gardeners and those working in greenery maintenance do not primarily cultivate their own properties, they are service providers on private or commercial sites – designing as well as in the maintenance and management of private gardens or company grounds. Both in the landscaping and in the choice of plants, the wishes of customers are of decisive importance for the ecological impact. In this field of action there are moreover associations and societies, such as the Austrian Horticultural Society ÖGG, which provide information on natural and ecologically valuable garden design.

A special feature of the field of action encompassing



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professional users is that all users must be certified specialists under the Vienna Plant Protection Products Act and are subject to official checks. As of 29 June 2021, a total of 1,060 persons in Vienna in the agricultural and commercial sector have obtained such a qualification certificate and are thus authorised to use all plant protection products approved in Austria.²⁵ Under current legislation, graduates of agricultural vocational schools, agriculture/forestry or other relevant VET colleges or a relevant university degree and persons with agricultural or related vocational training, as well as those who hold a trade licence for the pest control trade are entitled to apply plant protection products without additional further training.

Private users²⁶ (e.g. in allotments, private gardens, etc.)

Areas which can be classified as being “for private users” are diverse in type and structure: private gardens, courtyards, terraces, balconies, roof gardens, front gardens, but also allotment gardens, housing estates built by various developers as well as outdoor areas on company grounds. All these private green spaces are an essential natural resource of the city and fulfil important ecological functions. Many breeding birds living in Vienna prefer the gardens with their diverse niches and feeding opportunities as a habitat. It is precisely this diversity and small-scale structure that offers high ecological potential, even in densely built-up areas, for example as a food source for insects. In view of global warming, the plants and unsealed soil of private areas and gardens are enormously important.

Vienna boasts about 14 000 hectares of private land, 46% of which is green area. On 1 024 hectares, about 40 000 allotment gardens can be found on Viennese city territory. Of these, 489 hectares, i.e. 48% of the entire allotment garden areas, are leased to allotment garden associations by the City of Vienna.

Apart from the small-scale structure of its surface areas, this field of action is characterised by the large number of (potential) users, individual designs and maintenance practices. The design of many smaller and larger gardens, balconies and courtyards in Vienna is near-natural and thus, they contribute to biodiversity in the city as well as to the quality of life and recreation of their users. Unfortunately, others still maintain their gardens without considering nature. The wish to have an “orderly” garden leads to garden designs and management methods that not only contradict nature, but also entail permanent effort and running costs. Plants which look good in brochures may not be able to cope with the climate, substrate and location and are therefore permanently susceptible to pests or weather events. Keeping lawns clipped and hedges trimmed at all times leads

²⁴ Gardening in Vienna: <https://www.garteln-in-wien.at/>

²⁵ According to the “Green Report”, the number of authorised products has changed as follows: 2010: 575; 2019: 1 537, corresponding to +167 %

²⁶ In legal texts or in the context of professional discussions, the term „non-professional users” is also used for this group



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to gardens which are particularly poor in diversity, maintaining them requires large amounts of water, fertiliser and pesticides. Frequent cutting, especially by using robotic lawn mowers, contributes significantly to species depletion. "Low-maintenance" gravel gardens, the successors of large areas of washed concrete slabs, are the final stage of these developments, they are the nails in the coffin of all life. Such forms of garden design and cultivation far removed from nature are counterproductive in times of grave biodiversity loss and increasing global warming – not only for the city and nature in the city, but especially for the garden users themselves.

A major challenge of this field of action is to reach out to a large number of people and provide them with appropriate knowledge and information. On the one hand, there is a need to encourage and support those who already show a high interest in taking care of their garden in a near-natural way. On the other hand, it is equally important to raise more

awareness among those whose gardening practices do not take the ecological challenges into account. For this purpose, multipliers such as the Central Federation of Allotment Gardeners of Austria (Zentralverband der Kleingärtner Österreichs) or individual allotment garden associations are just as important as low-threshold measures to raise awareness and impart knowledge – including awards for areas that have been designed in a particularly nature-friendly way, for example by the Municipal Department for Environmental Protection of the City of Vienna, which awards the plaque "Near-natural green oasis" ("Naturnahe Grünoase") free of charge.²⁷

A special feature in the context of private users is that only a segment of the authorised plant protection products is permitted for private use. For this sector, no or only very limited information is available on which and how many products the private users apply.²⁸

27 For the "Near-natural green oasis": www.umweltschutz.wien.gv.at/naturschutz/gruenoase/
 Netzwerk Natur: www.umweltschutz.wien.gv.at/naturschutz/biotop/netzwerk.html
 CITY NATURE: www.umweltschutz.wien.gv.at/naturschutz/city-nature.html

28 Based on its own calculations, the environmental protection organisation Global 2000 assumes in its purchasing test on pesticides for home and garden that around 700 tonnes of pesticide products were sold throughout Austria for the home and allotment garden sector (2017 figures). When applying the figures from 2019, which serve as a basis for calculation, this results in around 600 tonnes of pesticide products sold to non-professional users throughout Austria: <https://www.global2000.at/sites/global/files/2019-Einkaufstest-Pestizide.pdf>



THE CITY AS A MULTI-PURPOSE SPACE OF LIFE

Overall, Vienna is a habitat with high biodiversity, especially because various areas offer numerous niches for many forms of life. The interplay of all these areas is of essential importance in the fight to overcome the ecological challenges as it helps foster biodiversity and climate protection or climate change adaptation. In this context, large urban green spaces play an eminent role. The same applies to the using the available scope for promoting biodiversity on sealed surfaces or on buildings (e.g. through living walls). At the same time, the ecological problem of soil sealing must be addressed carefully so as to safeguard Vienna's numerous ecologically and socially valuable green spaces, local agriculture and the high quality of life for future generations.

As climate change progresses, it is altering the living conditions for people, animals and plants alike. Extreme weather occurring more frequently than in the past, longer periods of cold or heat, frequent heavy rainfall events and higher selective pest pressure affect agricultural land, parks as well as individual gardens and plants. Near-natural design, biodiversity and ecological management practices heighten resilience to these developments and to pests.

The best possible use of the available space so biodiversity can be fostered in accordance with respective uses is crucial lever to keep "the Vienna habitat" resilient and fit for the future. Planning, design and management, including pesticide minimisation, must go hand in hand here.

Key measures of the Vienna Strategy for Pesticide Minimisation

FINETUNING OF THE LEGAL FRAMEWORK FOR HOME AND ALLOTMENT GARDENS

In principle, almost 400 products are currently authorised for private use in the home and allotment garden sector in Austria. In order to protect biodiversity, the Federal Provinces of Carinthia and Vorarlberg have limited the number of products available for private use to about 150 products; these can be found in a plant protection product database. As a result, only products with active ingredients which are also approved for organic farming or classified as low-risk products are allowed for private use in allotment gardens and home gardens. This measure leads to a significant and quick reduction in the application of hazardous pesticides in the private sector.

Vienna's goal is also to take legal measures for the reduction of pesticides, thus aiming at a significant reduction of hazardous pesticides to at least the same extent. For this purpose, the Vienna Plant Protection Products Act 1990, which currently sets out the legal requirements for the use of plant protection products, is to be amended in such a way that it is clear and comprehensible for users.

PROMOTION OF ADVISORY INITIATIVES

In Vienna, there are about 40,000 allotment gardens on a total of 1 024 hectares. Most of these are organised in associations and in the Central Federation of Austrian Allotment Gardeners. The design of the allotment gardens and their maintenance, which largely avoids the use of pesticides, can contribute significantly to broad local diversity and a large number of beneficial insects. Apart from gardening advisors already in place, "biodiversity officers" are to be trained for the allotment garden sites to act as advisors. The aim is that every allotment garden site should have a biodiversity officer and that all new garden tenants should receive free advice on biodiversity measures and how to minimise or even forego the use of pesticides. The training of future garden advisors is to be facilitated by the new module "Promoting Biodiversity in the Garden". Garden owners are to be informed about biodiversity issues through information stands at various events and fairs.

However, advice is also important in other areas. For example, special consultations for companies in agriculture and garden design are to be implemented within the framework of the **Vienna Strategy for Pesticide Minimisation**. Advice for interested companies wishing to design their outdoor areas in a way that promotes biodiversity is also a potential area for action.²⁹

EDUCATION MEASURES

Educational offers are relevant for each of the three fields of action in order to provide users with up-to-date knowledge on biodiversity promotion and pesticide minimisation. This must also be accompanied by appropriate knowledge on climate change adaptation as it changes the conditions for vegetation.

Many people are still unaware of the dramatic nature of biodiversity loss and insect mortality, and of the options everyone has for counteracting these.

Apart from institutional offers, such as the allotment garden activities described above, there is a need for education, biodiversity training and information for the general public, especially for the many types of leisure gardeners and hobby winegrowers, in order to communicate to them the current state of the art in low-pesticide and pesticide-free gardening.

In the field of professional users, educational measures – from specialised training to continuing education and special seminars – are of great importance and essential for a high level of professional competence. There are vocational schools/colleges and universities but also institutions such as the Rural Continuing Education Institute of the Vienna Chamber of Agriculture or Bio Forschung Austria,

which offer specific courses for practitioners. In the agricultural education system, i.e. in vocational schools/VET colleges as well as in continuing education courses for practitioners, skilled workers and master craftsmen, more tailor-made training and further education content on pesticide reduction should be offered. The same applies to professional pesticide users outside of agriculture, i.e. commercial garden designers, greenkeepers, etc. The apprenticeship and specialist training institutions are also important starting points for future practitioners.

It goes without saying that conveying solid professional skills and state-of-the-art knowledge through education is also essential for the area of public spaces. Apart from legally prescribed continuing education which the City of Vienna's specialist staff must attend anyway as part of their duties, the City of Vienna has also offered an in-house programme of specialised courses for a long time. Moreover, staff also attends relevant external courses, seminars and conferences. In order to train specialised staff in an even more targeted way in the future, existing courses will be updated and supplemented under the pesticide initiative, also with regard to the option of earning continuing education credits for the plant protection qualification certificate. These offers are intended to ensure the transfer of state-of-the-art knowledge on the promotion of biodiversity and on minimising the use of pesticides in the most practice-oriented, target group-specific and quality-assured manner possible. Where it makes sense, new offers should be created; likewise, cooperation with other institutions, such as the federal government, should be contemplated and individual educational offers should be opened up to specific groups of specialists who do not belong to the staff of the City of Vienna.



²⁹ See also, for example, the OekoBusiness Wien programme "FirmenGrün"; www.umweltschutz.wien.gv.at/oekobusiness/modul-firmengruen.html

COMMUNICATION MEASURES, AWARENESS RAISING AND SENSITISATION

This key measure aims to raise awareness and inform the general public about pesticide minimisation and biodiversity promotion as well as related issues (e.g. food production).

For this purpose, uniform communication with recall value is sought, bringing together the City of Vienna and the members of the Pesticide Minimisation Initiative. It should provide information on the progress made in the field of pesticide minimisation and on personal options for action, and it should include and, if necessary, supplement information already available. The aim is to develop and structure relevant information and offers in such a way that citizens can easily find their way through the wide variety of information, service and product offers in a trustworthy and quality-assured format. The potential forms and channels are manifold: website, database, social media, press and media work, videos or a video series, articles in journals and magazines, folders and brochures, information in public spaces, awards such as the "Naturnahe Grünoase" plaque and events.

Furthermore, best practices in the form of show gardens and showcase projects such as "Fruit City Vienna" ("ObstStadt Wien")³⁰ should increasingly be made tangible and accessible, even away from public parks and show gardens (such as the Kagran School Garden, the Hirschstetten Flower Gardens or the Garden of Diversity in Organic Research); this could be done through a show garden network, guided tours through special private or small gardens, or events, and raising awareness among children through appropriate information offers can be included.

To communicate the successes and progress made also requires joint external communication from the City of Vienna and the members of the Pesticide Minimisation Initiative.



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30 ObstStadt Vienna: <https://wien.obststadt.at>

31 ÖkoKauf Vienna: <http://www.oekokauf.wien.at/>

32 Ikonline Chamber of Agriculture Vienna: <https://wien.lko.at/bio-aktionsprogramm+2400+3500026>

33 Supplemented by environmental influences (temperatures, drought and heat, rain, pest pressure, etc.) so that causalities can also be identified from the figures and alternatives contributing to pesticide minimisation can be pushed

PROCUREMENT AND AWARDING OF CONTRACTS

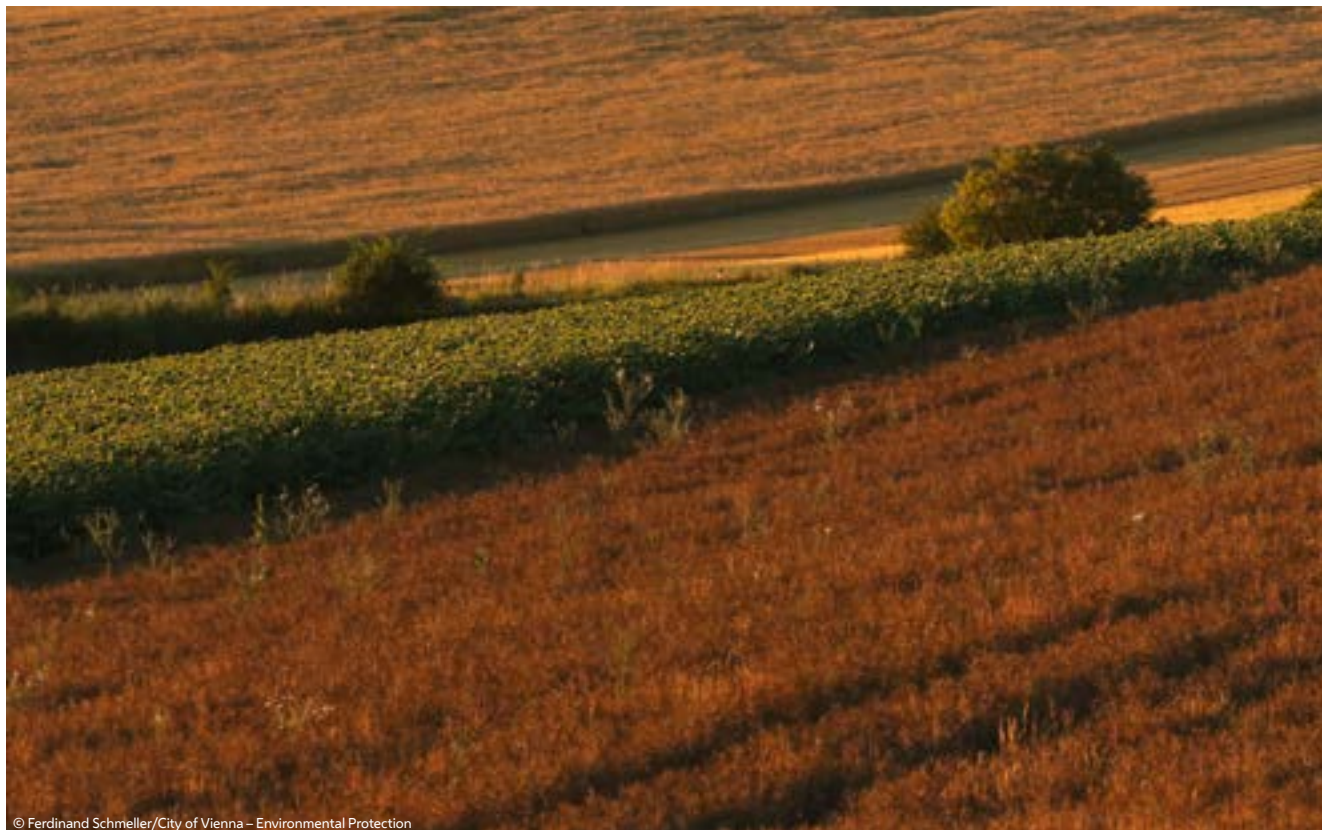
Public procurement and awarding of contracts are based on the Federal Procurement Act 2018 as amended and decree MDK- 148782-1/13. This decree stipulates that the City of Vienna is committed to procuring according to ecological criteria. With ÖkoKauf Wien³¹, the City of Vienna has a proven instrument for greening public procurement based on ambitious principles and criteria. The basic principles of this strategy as well as the high product and application standards of the City of Vienna are currently being summarised by a working group in an ÖkoKauf position paper and subsequently specified as criteria catalogues for the areas of plant protection and plant purchasing, possibly also for biocides. These are intended to serve all relevant departments as well as outsourced enterprises and companies; they are to provide guidance on the procurement of plants in accordance with procurement law and on the awarding of contracts for the design, care of plants and maintenance of open spaces.

The City of Vienna acts as a role model in the procurement of food on the basis of organic purchasing guidelines and concrete specifications. In the procurement of food for municipal catering, products from the region, produced with minimal use of pesticides in accordance with the goals of this strategy and sold at reasonable prices should also be promoted. This measure is in line with the Viennese Food Action Plan "Wien isst G.U.T. (Gesund und genussvoll – Umwelt- und klimafreundlich – Tierfair)", meaning that Vienna eats healthy and enjoyable – environmentally and climate friendly food – produced in line with animal welfare principles), a plan which provides for generally high food quality standards and an increase in the percentage of organic foodstuffs used in municipal catering.

THE CONTINUING GREENING OF VIENNA'S AGRICULTURE – MORE ORGANIC FARMING

In addition to the supply of the population and the economic sustainability of the farms, ongoing greening and the expansion of organic farming are the main goals for Viennese agriculture as a whole. On the one hand, this is a political goal of the city government set forth in the Vienna Agriculture Act; on the other hand, it is also the declared goal of the Vienna Chamber of Agriculture within the framework of the strategy "Future Urban Agriculture 2025". The City of Vienna and the Vienna Chamber of Agriculture cooperate in a spirit of partnership here.

Building on the experience of the first Organic Action Programme of the City of Vienna, which lasted until 2020 and has already successfully supported farms in switching to organic farming, the Organic Action Programme is to be



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continued and further developed in order to successively increase the share of organically farmed areas and organic farms. According to the results of a survey by the Vienna Chamber of Agriculture, 50% of the farms in Vienna see potential in switching to organic farming³². To this end, financial support for conversion, further training and support via specialist advice for farms during and after conversion are to become part of the Organic Action Programme in the future. These measures should cover areas such as soil, revegetation, pesticide minimisation as well as preventive and alternative plant protection; they are to be structured according to the requirements of the viticulture, arable farming and horticulture sectors. The aspect of climate change adaptation is also relevant here.

In addition to organic farms and conversions to organic, greening measures in conventional farms are likewise to be promoted and supported by the City.

Where relevant knowledge is lacking or new challenges arise, it also makes sense to promote applied research or supported experimental activities on farms.

Apart from the implementation of pesticide reduction measures in the course of all these activities, the monitoring of developments in pesticide use, biodiversity protection and the promotion of biodiversity in agriculture form the second important pillar of measures in this area. Therefore, the City and the Vienna Chamber of Agriculture as well as users in agriculture are to join forces to ensure data availability which allows a valid assessment of the trends (active ingredient groups and quantities used) for the Province of Vienna.³³

FUNDING DECISIONS

The Province of Vienna aims to ensure that its efforts to minimise the use of pesticides are also consistently taken into account within the framework of the subsidies it grants. As a consequence, it is ensured that subsidies contribute to the goals of pesticide minimisation. For example, this applies to subsidies in the field of construction and housing, urban renewal and district renewal, agriculture and forestry, etc.

SPECIFIC MEASURES IN THE BIOCIDES SECTOR

Biocides are used instead of pesticides (e.g. rodenticides) or protective agents (to protect materials, e.g. wood) with the aim of protecting humans and beneficial organisms. Pesticides and protective agents released into the environment are particularly problematic. The active substances are highly toxic and long-lived. They also affect non-target organisms (such as the protected field hamster instead of the rat), accumulate in the food chain and pollute ground water. The improper or excessive use of biocides is a problem. The "Green Report" shows that the use of biocides has increased significantly in recent years. The government programme of the Progress Coalition provides for the most restricted use of biocides, too. Within the framework of the **Vienna Strategy for Pesticide Minimisation**, a working group of in-house and external experts will discuss the issues of biocide use, its negative effects and potential alternatives, and it will develop measures to improve the situation and minimise biocide use.

Member organisations of the initiative

The following departments of the City of Vienna and its enterprises and companies, federal institutions, associations and organisations work together in the pesticide minimisation initiative, have helped to develop the measures and are involved in their implementation:

Leader of the initiative: City of Vienna – Environmental Protection, Vienna Ombuds Office for Environmental Protection in cooperation with the Vienna Eco-Social Forum.

In close coordination with the City of Vienna – Parks and Gardens and the City of Vienna – Forestry and Agriculture.

Legislative processes: City of Vienna – Water Law

WORKING GROUP MUNICIPAL AND PUBLIC AREAS, PUBLIC SECTOR ENTERPRISES AND COMPANIES

City of Vienna – Parks and Gardens; City of Vienna – Environmental Protection; City of Vienna – Swimming Pools; City of Vienna – Vienna Water Management; City of Vienna – Forestry and Agriculture; City of Vienna – Housing;

Wiener Linien; Wiener Netze; Wiener Lokalbahnen; Vienna Cemeteries; Vienna Ombud Office for Environmental Protection; City of Vienna – Inspection of Business Establishments, Fire Protection and Events/Chemicals and Biocide Inspection; Federal Gardens; Schönbrunn Zoo; Austrian Federal Railways; Vienna Eco-Social Forum

PROFESSIONAL USERS WORKING GROUP

City of Vienna – Environmental Protection; Vienna Ombud Office for Environmental Protection; City of Vienna – Agriculture; Bio Forschung Austria; biohelp; Vienna Chamber of Agriculture; Vienna Eco-Social Forum; Vocational School for Horticulture Kagran; VET College Schönbrunn; Schottenstift Agricultural Enterprise.

PRIVATE USERS WORKING GROUP

City of Vienna – Environmental Protection; Bio Forschung Austria; biohelp Garten & Bienen; DIE UMWELTBERATUNG; Global 2000; Natur im Garten Wien; Vienna Eco-Social Forum; Österreichische Gartenbau-Gesellschaft ÖGG und Innung der Gärtner und Floristen; Vienna Ombud Office for Environmental Protection; Zentralverband der Kleingärtner und Siedler Österreichs (Central Federation of Allotment Gardeners in Austria)



LEGAL NOTICE

Media owner and publisher:

Vienna City Administration, City of Vienna – Environmental Protection, Dresdner Strasse 45, 1200 Vienna
wien.gv.at/english/environment/protection | post@ma22.wien.gv.at

Editors: Wolfgang Khutter – City of Vienna – Environmental Protection and Rene Hartinger – Vienna Ecosocial Forum

Graphic design: ergott visual communication, Vienna

Photo on front page: © Manfred Schönwälder/City of Vienna – Environmental Protection

Printed by Druckerei der Stadt Wien – printed on ecological printing paper from the ÖkoKauf Wien sample folder

Please note that most of the sources are available in German only.

