



Food and Agriculture
Organization of the
United Nations



Milan Urban Food Policy Pact Monitoring Framework

July 2018 version

Indicator 25: Number of city residents within the municipal boundary with access to an (urban) agriculture garden

MUFFP framework of actions' category: Food production

Number of city residents with access to urban agriculture gardens/land. In order to account for geographic, economic and social differences across cities in access to gardens, the indicator will only reflect impact accurately if data is filtered by geospatial location, population density, income levels etc.

Overview table

MUFFP Work stream	Food production
MUFFP action	Promote and strengthen urban and peri-urban food production and processing based on sustainable approaches and integrate urban and peri-urban agriculture into city resilience plans.
What the indicator measures	<p>The indicator measures the accessibility of city residents (and specific target groups) to urban agriculture gardens/land. In order to account for geographic, economic and social differences across cities in access to gardens, the indicator will only reflect impact accurately if data is filtered by geospatial location, population density, income levels etc.</p> <p>Note: There may be situations where gardens exist, but people cannot access them due to cost, mobility or lack of adaptations for people with physical disabilities.</p> <p>Note: These can include city-designated gardens or urban agriculture gardens (community gardens, school gardens, allotment gardens) that are privately owned/managed or managed by social, community and other organisations. Data on the latter categories may be scarcer.</p> <p>Note: Urban agriculture is about food production, but also social, community benefits and environmental services. Depending on local policy interests, the indicator may focus on specific urban agriculture gardens or for example on gardens for food production only.</p>

Which variables need to be measured / what data are needed	<p>Metrics may include:</p> <ul style="list-style-type: none"> -Number of city residents within the municipal area -Number of agriculture gardens within the municipal areas -Spatial location of the gardens in relation to location of the growers household -Frequency of use (e.g. the definition of gardens and gardeners should reflect meaningful participation (such as criteria for minimum time commitment/time spend). Including gardens where people are only occasional visitors or have low involvement inflates data and distorts impact. <p>Possible additional data:</p> <ul style="list-style-type: none"> -Number (and type) of supporting policies -Number of growers/garden -Costs/fees of garden use. - Urban agriculture gardens surface area available per capita/household (or for different categories of households) -Number of people on garden waiting lists.
Unit of measurement (i.e. Percentages, averages, number, etc.)	Number or percentage of city residents
Unit(s) of Analysis (i.e. people under 5 years old, etc.)	Information may be disaggregated for specific target groups: low-income populations, slum inhabitants, elderly, migrants, specific ethno-cultural communities vs. newcomers, etc.
Possible sources of information of such data	<ul style="list-style-type: none"> -The city department/programme for (urban) agriculture, land use planning, cadastre, parks and gardens department, social development, health -NGOs, institutions
Possible methods/tools for data-collection	Data on number of urban agriculture gardens are likely available with different municipal support programmes. Spatial localisation of the gardens will require GIS mapping. Further analysis would require assessment of (supportive) policies, user fees and garden use/functioning.
Expertise required	GIS, policy analysis, survey design and administration
Resources required/ estimated costs	
Specific observations	
Examples of application	<p>In 2015, New York City committed in One New York: The Plan for a Strong and Just City to further build a more sustainable, resilient, and just food system where more of its food comes from regional and local growers, producers, and manufacturers. To achieve those goals, New York City is investing in infrastructure to strengthen its regional food system, supporting community based gardening and greening efforts to engage communities around food production, healthy eating, and community development, and encouraging the growth of local food producers and manufacturers to create good job opportunities in the food sector. As part of its Food Metrics Reporting, the city of New York monitors a set of related indicators, including the Number of registered community gardens on city-owned property. See: http://www1.nyc.gov/assets/foodpolicy/downloads/pdf/2017-Food-Metrics-Report-Corrected.pdf</p> <p>The city of Quito (Ecuador) set of its Urban Agriculture programme in 2002. The city monitors: Location of the urban agriculture gardens supported, surface area, type of gardens, number and type of users, production systems applied, technologies used and product destination.</p>

Rationale/evidence

The Milan Urban Food Policy Pact acknowledges that urban and peri-urban agriculture offers opportunities to contribute to synergies across food security and nutrition, ecosystem services and human well-being. Urban agriculture gardens are important green spaces and offer a myriad of environmental, economic and social benefits such as providing fresh products and plants as well as contributing to a sense of community and connection to the environment, providing an opportunity for satisfying labour, improving neighbourhood, air quality, bio-diversity, contributing to air cooling, and the well-being of residents and neighbourhoods.

Urban agriculture gardens contributes to household and community food security, allowing citizens to grow their own food, share, sell or to donate what they have grown. Urban agriculture gardens are one (complementary mechanisms) that may help increase accessibility for fresh food in local neighbourhoods.

Urban agriculture gardens are also promoted for stronger community cohesion, integration of migrant populations and for providing income and jobs where growers produce for the nearby market. Urban agriculture gardens provide other social benefits, such as the sharing of food production knowledge with the wider community and safer living spaces. Other benefits include mental or physical rehabilitation and therapy, as well as teaching a set of skills for job-related placement. Urban agriculture gardens may also be used for educational and recreational purposes.

One strong tradition in gardening in urban areas is cleaning up abandoned vacant lots and turning them into productive gardens. Alternatively, urban agriculture gardens can be seen as a health or recreational amenity and included in public parks, similar to ball fields or playgrounds. Historically, urban agriculture gardens have also served to provide food during wartime or periods of economic depression. Access to land and security of land tenure remains a major challenge for community gardeners.

This indicator specifically looks at accessibility of different types of city residents to different forms of urban agriculture gardens (municipal land, school gardens, allotment gardens, individual and institutional gardens). These urban agriculture gardens can be located on publicly-owned land or on private/institutional land through an agreement between the municipality and the land owner.

The indicators prioritises assessment of accessibility over mere availability of urban agriculture gardens per X number of residents. After all, there are many situations where gardens exist, but people cannot access them due to cost, mobility or lack of adaptations for people with physical disabilities. Amongst others, the location of an urban agriculture gardens may be a critical factor in determining accessibility: how often a garden is used and who visits it. Exposure to a garden is much more likely for individuals if they are able to walk or drive to the location, as opposed to public transportation. The length of travel time is also a factor. Those who live within a 15-minute or less travel distance are more likely to visit an urban agriculture garden as compared to those with a longer travel time¹. Such statistics should be taken into consideration when choosing a location for these gardens for a target population. Spatially locating the urban agriculture gardens in the city will also allow for relating availability to specific type of target groups (e.g. low-income populations, elderly, migrants). All these aspects need to be considered in data collection and interpretation (limitations of data) to determine barriers to gardening in people who wish to garden.

Urban agriculture gardens, publically or privately owned, are to a large extent impacted and governed by policies at the city level. Urban agriculture gardens may compete with the interests of developers.

¹ Blaine, Thomas W.; Grewal, Parwinder S.; Dawes, Ashley; Snider, Darrin. 2010. "[Profiling Community Gardeners](#)". 48 (6). Archived from [the original](#) on 5 May 2016.

In particular, zoning laws strongly impact the possibility of urban agriculture gardens. Policies can be enacted to protect urban agriculture gardens from future development. For example, New York State reached a settlement in 2002 which protected hundreds of community gardens which had been established by the Parks and Recreation Department GreenThumb Program from future development. In Rosario, Argentina, over 18 hectares of community garden parks are zoned by the Municipality and support (inputs, training, technical assistance, market outlets) is provided by the city's Urban Agriculture Programme to community growers.

Information on policies for allocation of gardens/plots and on costs (user fees) will provide further insight on the level of access for specific residents.

Glossary/concepts/definitions used

Urban agriculture gardens are defined as any gardens/areas of agricultural land within the municipal boundaries (Note that different cities may use different concepts and definitions for urban, sub-urban and peri-urban agriculture that may or may not fall within this concept). There are different types of urban agriculture gardens. Common types include:

- **Community gardens**, involving "any piece of land gardened by a group of people, utilising either individual or shared plots on private or public land". They are publicly functioning in terms of ownership, access, and management, as well as typically owned in trust by local governments or not for profit associations. Community gardens vary widely throughout the world. In North America, community gardens range from familiar "[victory garden](#)", areas where people grow small plots of vegetables, to large "greening" projects to preserve natural areas, to tiny street beautification planters on urban street corners (depending on local context cities may denominate these as nature gardens, pollination gardens, rain gardens).
- In the UK and the rest of Europe, community gardens or closely related "[allotment gardens](#)" which can have dozens of plots, each measuring hundreds of square meters and rented by the same family for generations. In the developing world, commonly held land for small gardens is a familiar part of the landscape, even in urban areas, where they may also function as [market gardens](#).
- **Micro-gardens** allow for use of small and built-up spaces (rooftops, backyards, patios, vacant patches of land along roadsides or waterfronts) to grow leafy vegetables, tubers and herbs and small animals².

Preparations

Staff/ organisations responsible for data collection and analysis should agree on type of data and level of analysis required or desired: will collection and analysis be limited to collecting data on the number of urban agriculture gardens for example, or will further data collection and analysis also be done on spatial location, support policies and garden functioning/performance? Once objectives are agreed upon, the methodological guidelines should be shared with the team responsible, and methodology, operational plan/time schedule/commitments, and reporting agreed upon. Spatial localisation of the gardens requires city maps and GIS; analysis of the functioning of the gardens will require development of survey guidelines.

Sampling

Data can be collected for the entire city or for specific low-income areas if reaching these target groups is a specific policy priority.

² The City of Antananarivo (Madagascar) urban agriculture programme aims at tackling food insecurity through the creation of micro gardens in low income neighbourhoods. So far, the programme has spread to 24 districts and reached 15,000 beneficiaries. See for a short video: https://www.youtube.com/watch?time_continue=142&v=tRnAcaNEAaw

Data collection and data disaggregation

Data on the total number (and type) of urban agriculture gardens are probably available with different municipal programs and departments (urban agriculture program, parks and gardens, cadastre and land use).

Spatial localisation of the gardens will require GIS mapping. Guidelines on such GIS mapping can be found in the Methodological Guidelines for Indicator 27 *Surface area of (potential) agricultural spaces within the municipal boundary*. Gardens can be localised in different areas of the city and/or in relation to residence locations of grower households.

Further analysis could involve assessment of number and type of (supportive) policies, user fees and garden use/functioning. Policy analysis would entail analysis of land use and zoning policies, urban agriculture and garden, or social support policies and programmes (financial support, input supply, training, technical assistance). Such policy analysis could be done in conjunction with data collection and analysis on Indicator 26 *Presence of supportive municipal policies that allow/promote agriculture production and processing within the municipal area*.

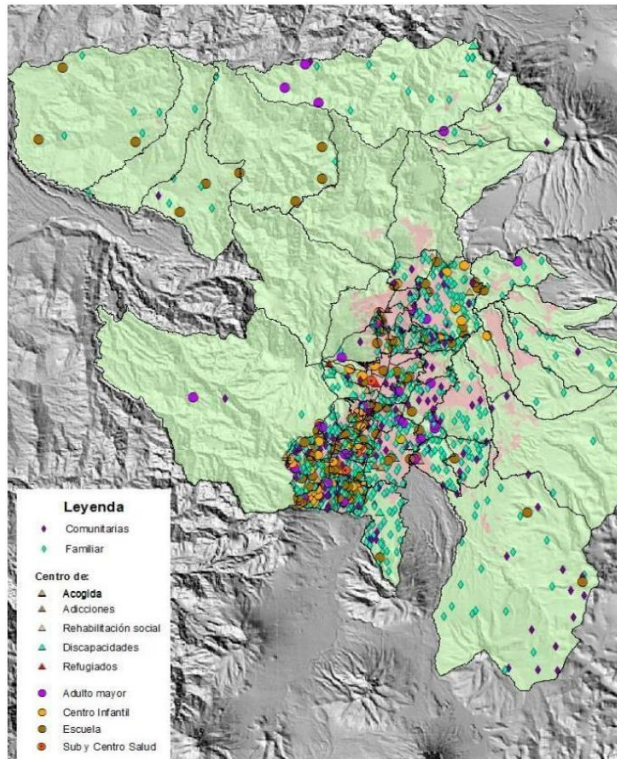
Data on the functioning of the gardens, land use/lease arrangements and user fees, number and type of growers involved, products grown and destination and social, economic and environmental impacts, etc. can be collected through garden surveys. A recently released [report on urban agriculture indicators](#) for Toronto may provide a source of inspiration. The listed indicators form the basis for how urban agriculture activity can be measured and tracked in a Toronto specific context. The indicators outline ways to measure the social, economic, health, and environmental benefits of growing food in the city.

Data analysis/calculation of the indicator

Dividing the total number of municipal support urban agriculture gardens by the total number of city residents will provide the metric for this indicator.

Spatial localisation of urban agriculture gardens on a GIS map will allow for further determining both availability and accessibility of specific resident groups to the urban agriculture gardens. Where access by citizens to urban agriculture gardens is low, a map can be drawn on priority neighbourhoods for future establishment of new gardens. This can be cross-checked with the vacant and available agricultural and open area in the city (see respective indicator 27 *Surface area of (potential) agricultural spaces within the municipal boundary*).

The city of Quito localises the urban agriculture gardens supported by the Municipality on a map. Coverage in rural areas in the Metropolitan Districts is sought to be expanded.



Location of urban agriculture gardens supported by the Quito AGRUPAR programme (2017)

The city of New York identified priority neighbourhoods to make affordable, nutritious food more accessible to all New Yorkers. The map below reports on the (lack of) presence of grocery stores. Similar maps can be drawn for the presence of urban agriculture gardens.



Map of priority neighbourhoods, New York City, Food Metrics Report 2017.