



Food and Agriculture
Organization of the
United Nations



Milan Urban Food Policy Pact Monitoring Framework

March 2021 version

Indicator 28: Proportion of total agricultural population –within the municipal boundaries- with ownership or secure rights over agricultural land for food production, by gender

MUFPP framework of actions' category: Food production

The indicator monitors ownership and rights over agricultural land. By specifically promoting data disaggregation by gender, this indicator is particularly useful in terms of framing gender differences in land ownership and control.

Overview table

MUFPP Work stream	Food production
MUFPP action	<p>Apply an ecosystem approach to guide holistic and integrated land use planning and management in collaboration with both urban and rural authorities and other natural resource managers by combining landscape features, for example with risk-minimizing strategies to enhance opportunities for agroecological production, conservation of biodiversity and farmland, climate change adaptation, tourism, leisure and other ecosystem services.</p> <p>Protect and enable secure access and tenure to land for sustainable food production in urban and peri-urban areas, including land for community gardeners and smallholder producers, for example through land banks or community land trusts; provide access to municipal land for local agricultural production and promote integration with land use and city development plans and programmes.</p>
What the indicator measures	The indicator monitors ownership and rights over agricultural land. By specifically promoting data disaggregation by sex, this indicator is particularly useful in terms of framing gender differences in land ownership and control.
Which variables need to be measured / what data are needed	<ul style="list-style-type: none"> • Total agricultural population within the municipal boundaries • Number of households or people with land ownership and secure rights over agricultural land for food production • Number of women with ownership or rights over agricultural land
Unit of measurement (i.e. Percentages, averages, number of people, etc.)	<ul style="list-style-type: none"> • Percentage of people with ownership/secure land rights as per the total agricultural population • Percentage of women with ownerships/secure rights as part the total of people with ownerships and secure land rights
Unit(s) of Analysis (i.e people under 5 years old, ect.)	Data disaggregation by sex: share of men/women among owners or rights-bearers of agricultural land, by type of tenure

Possible sources of information of such data	-Administrative records (cadastre or land registry) -Household and agricultural surveys
Possible methods/tools for data-collection	Analysis of administrative records and existing surveys; implementation of new surveys
Expertise required	Survey design, implementation and analysis
Resources required/estimated costs	
Specific observations	
Examples of application	This indicator already exists. Until now, the indicator has been collected mainly through livelihood and national household income and expenditure surveys (like FAO and World Bank LSMS-ISA ¹ surveys). The indicator is available for specific countries, but has not been applied yet at city-level. It is also worth mentioning that the importance of a sex-disaggregated indicator on land is acknowledged in the Minimum Set of Gender Indicators approved by UN Statistical Commission, where a place-holder indicator 'proportion of the (adult) population who own land, by sex' figures as one of the 52 indicators. Furthermore, the EDGE (Evidence and Data for Gender Equality) initiative is conducting methodological work on standards for the collection of reliable sex disaggregated data on land ownership.

Rationale/evidence

The overarching goals of improving the governance of tenure of land and natural resources is achieving food security, shared prosperity and sustainable development, based on the recognition of the centrality of land to food production and the requirement of promoting secure tenure rights and equitable access to land and natural resources for people, communities and others. There is an inextricable link between land access, tenure security on one hand, and equity, income/food security on the other. Many of the poorest and food insecure groups are those with the most insecure land tenure rights, including female headed households, orphans, migrant farm workers, peri-urban slum dwellers, and the internally displaced persons. Secure tenure rights to land and natural resources are a key for poor populations to access the very basic resources that would allow them to develop and sustain their livelihoods². This holds true for both rural as well as urban and peri-urban producers.

In many urban, peri-urban and rural areas of cities, agricultural activities -including animal husbandry, horticulture, aquaculture, fruit production- are practiced in various locations, around the house (backyard, rooftop gardening), in open areas in the city and on peri-urban farms. Food production may take place on private land (owned, leased), on public land (parks, conservation areas, along roads, streams and railways, leased), or semi-public land (schoolyards, grounds of schools and hospitals). Incentives for producers to invest are often compromised by the lack of security concerning land tenure and the fear of eviction. Why erect terraces, improve and fertilise the soil, or build irrigation systems if there are no guarantees that benefits will be reaped from those investments? Studies have shown that the lack of such arrangements is the main obstacle to the development of sustainable food production in urban and peri-urban areas, including land for community gardeners and smallholder producers, with negative effects on women in particular. Land tenure does not mean automatic land ownership. Integration of urban and peri-urban agriculture into city development and land use plans, taxation rules and legal frameworks are therefore necessary to provide security and incentives for producers.

¹ Living Standards Measurement Study-Integrated Surveys on Agriculture. <http://surveys.worldbank.org/lsms/integrated-surveys-agriculture-isa>

² <https://unstats.un.org/sdgs/files/metadata-compilation/Metadata-Goal-1.pdf>

Achieving tenure security at scale, and sustaining this, may require adjustments of policy and legal framework and implementation practice for land administration and land information systems. Cities have explored a variety of arrangements for granting permanent or temporary land access and tenure. Identifying land for food production (see also Indicator 27 *Surface area of potential agricultural spaces in the municipal area*) is often only the first step. If urban growers cannot buy land outright, it is important that they can create an arrangement in order to stay on the land long enough to invest in its productivity. Strategies that can be used include:

- (1) **Support land lease and purchase programs.** Once land has been identified, municipalities can establish programmes to lease city-owned plots to urban and peri-urban growers at a low or reasonable cost. Many cities run garden lease programmes where individuals, families associations and community organisations can lease a plot for a nominal fee or are granted temporary user rights, often based on specific land use agreements. Leases often run for renewable periods of 1-5 years, but do not automatically guarantee security of tenure. New York City's GreenThumb programme, housed within the Department of Parks and Recreation ("DPR"), is the largest community gardening program in the USA, with over 500 city-owned gardens in its network. DPR guarantees the renewal of licenses for gardens on its land; however, gardens are still at risk as the city may revoke a license with 45 days' notice. If the city does revoke a license, it is required to make efforts to relocate the garden. It must provide the licensee with a list of all available city-owned vacant land within one-half mile of the existing garden. The licensee may select any lot from that list as a relocation site.
- (2) **Establish a community land trusts focused on urban farming.** Community land trusts (CLTs) can be used to promote urban agriculture. A CLT is a non-profit corporation committed to ensuring that land is used in the best interests of a community, while using charitable donations to cover its costs. A trust acquires land and maintains ownership of it permanently, which can be helpful in alleviating land tenure issues. The CLT can then lease (or sublease) its property to urban farmers. In Providence, USA, the Southside Community Land Trust has operated for over 30 years, focusing on urban farming. The Trust takes an active role in farming its properties, recruiting community members to farm over a dozen gardens. Among other programmes, the Trust trains beginning farmers in business development and farming practices, and participating farmers become eligible to lease land owned by the Trust³.
- (3) **Establish a land bank** for urban and peri-urban food production. Based on land use mapping, Rosario (Argentina) created a Municipal Agricultural Land Bank (a cadastral-based land registry) and brings those in need of agricultural land in contact with the owners of vacant land. The city also leases vacant land from private landowners to sub-lease it to community groups interested in using the land productively. A third effective instrument used in Rosario is the increase of municipal taxes on idle urban land and reduction of taxes for landowners who make idle land available for farming (temporary or permanent)⁴. Baltimore (USA) also maintains a land bank of available vacant city-owned land and provides such land to commercial small-scale urban farmers in five-year leases (BCPC 2013)⁵.

³ Good laws, good food: Putting local food policy to work for our communities, 2017. Harvard Food Law and Policy Clinic and John Hopkins Centre for a Liveable Future, USA. https://www.chlpi.org/wp-content/uploads/2013/12/good-food-good-laws_toolkit-10.23.2017.pdf

⁴ Baker L. and H. de Zeeuw, 2015. Urban food policies and programmes. In: Drechsel and De Zeeuw (ed). Cities and agriculture-Developing resilient urban food systems, 2015. Earthscan-Routledge London and New York. <http://www.ruaf.org/urban-food-policies-and-programmes-overview>. Viljoen, A., Schlesinger, J., Bohn, K. and A. Drescher, 2015. Agriculture in urban design and spatial planning. In: Drechsel and De Zeeuw (ed). Cities and agriculture-Developing resilient urban food systems, 2015. Earthscan-Routledge London and New York. <http://www.ruaf.org/urban-food-policies-and-programmes-overview>.

⁵ Baker L. and H. de Zeeuw, 2015. Urban food policies and programmes. In: Drechsel and De Zeeuw (ed). Cities and agriculture-Developing resilient urban food systems, 2015. Earthscan-Routledge London and New York. <http://www.ruaf.org/urban-food-policies-and-programmes-overview>.

The indicator “Proportion of total agricultural population with ownership or secure rights over agricultural land for food production, by sex”, is related to the Sustainable Development Goal 1, target 1.4: *“By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.”* It is also related to Goal 5 (Achieve gender equality and empower all women and girls) and Goal 11 (Make cities and human settlements inclusive, safe, resilient and sustainable).

By specifically promoting data disaggregation by sex, it gives a clearer picture of gender and social inequalities in land ownership/control, than for instance looking at the incidence of female ownership/control over land in the entire population of a country or city. An increase in the percentage of women owning/controlling land indicates that, within the population of interest (i.e. the landowners/rights bearers), progress is made towards achieving equal rights over land among men and women.

Glossary/concepts/definitions used

The term **‘agricultural land’** is used to indicate land used for farming, livestock and forestry activities for food production within the municipal area.

The term **‘agricultural population’** is intended in a broad sense – i.e. all including people for whom farming is their principle source of livelihood, or those who practice food production as a complementary livelihood strategy. They can have ownership and rights over land or not.

People use a wide range of strategies to gain **access to land**. These include:

- Purchase
- Adverse possession or prescription (the acquisition of rights through possession for a prescribed period of time). In some countries, this may be the only method for small farmers to gain formal access to vacant or abandoned land and to bring it into productive use.
- Leasing, or gaining access to land by paying rent to the owner
- Sharecropping, or gaining access to land in return for paying the owner a percentage of the production
- Inheritance, or gaining access to land as an heir
- Squatting illegally on land.

Access to land may be granted to individuals or to organised communities and associations of producers.

A **landowner** is the legal owner of the land. Broadly speaking, legal ownership or legal owner-like possession describes land rights that provide statutory security of tenure. This may be done through a formal land title system, but may also include certain forms of customary land tenure arrangements where land rights are registered or certified in some way. The following types of tenure arrangements may be included under this heading:

- Ownership is certified through a title, which gives the individual the right to determine the nature and extent of the use of the land.
- Land is held under conditions that enable it to be operated as if legally owned. E.g., the land is operated under hereditary tenure, perpetual lease, or long-term lease, with nominal or no rent.
- The land is held under a tribal, communal, or traditional form of tenure, which is legally recognised by the state. Such arrangements usually involve land being held on a tribal, village, kindred or clan basis, with land ownership being communal in character but with certain individual rights being held by virtue of membership in the social unit. Such arrangements can

be formalised through the establishment of legal procedures to identify the community's land and to manage the land rights of community members.

Definitions of ownership may vary across countries and surveys. For instance, documented ownership means that ownership is verified through title or deed, while reported ownership relies on individuals' own judgment. Reported ownership may be more appropriate in countries where a formal registration system is not in place. Additionally, and particularly where private ownership of land is not applicable, it is more appropriate to investigate rights over land using proxies able to capture individuals' capability to control and take decisions over the land. This may include settings where customary rights prevail as opposed to individual ownership. Proxies of such "bundle of rights" may include the right to sell, to bequeath or the right to decide how to use the land. Since the definition of ownership and land rights has to take into account what is more relevant in the country, the indicator will need to be complemented with metadata that specify what definition(s) of ownership or rights over land is/are employed.

Land tenure: The arrangements or rights under which people, communities and others gain access to land, fisheries and forests is defined and regulated by societies through systems of tenure. Land tenure refers to laws, policies, customs and institutions that define and govern people's rights to use, control and transfer land⁶. These tenure systems determine who can use which resources, for how long, and under what conditions. The systems may be based on written policies and laws, as well as on unwritten customs and practices. Tenure systems increasingly face stress as the world's growing population requires food security, and as environmental degradation and climate change reduce the availability of land, fisheries and forests. Inadequate and insecure tenure rights increase vulnerability, hunger and poverty, and can lead to conflict and environmental degradation when competing users fight for control of these resources.

The FAO World Census of Agriculture encourages to use four country-specific types of tenure whilst ensuring the possibility to classify ex-post under the following broad categories:

- 1) Legal ownership or legal owner-like possession;
- 2) Non-legal ownership or non-legal owner-like possession;
- 3) Rented land from someone else;
- 4) Various other types of land tenure.

Security of tenure is the certainty that a person's rights to land will be recognised by others and protected in cases of specific challenges. All forms of tenure should provide all persons with a degree of tenure security, with states protecting legitimate tenure rights, and ensuring that people are not arbitrarily evicted and that their legitimate tenure rights are not otherwise extinguished or infringed. People with insecure tenure face the risk that their rights to land will be threatened by competing claims, or even lost as a result of eviction.

Secure tenure rights are use or ownership rights to land that are legally recognised, even if no formal document is issued, customary rights being the most prominent example and it does not require ownership (i.e. long term leases or short term ones that are routinely renewed as well as group rights qualify). Security implies that an individual cannot be deprived of his or her land rights involuntarily. This normally requires that duration, subject, and object of rights are clearly defined. For the latter, physical markers, a map or sketch (not necessarily a high precision survey) that shows the parcel's position relative to others is normally needed.

⁶ <http://www.fao.org/economic/ess/ess-wca/wca-guidelines/en/>; and UN-FAO and Committee on World Food Security, 2012. Voluntary guidelines on the responsible governance of tenure of land, fisheries and forests in the context of national food security. <http://www.fao.org/docrep/016/i2801e/i2801e.pdf>

Security of tenure can however not always be measured directly and, to a large extent, it is what people perceive it to be. The attributes of security of tenure may change from context to context. For example, a person may have a right to use a parcel of land for a 6 month growing season, and if that person is safe from eviction during the season, the tenure is secure. By extension, tenure security can relate to the length of tenure, in the context of the time needed to recover the cost of investment. Thus the person with use rights for 6 months will not plant trees, or invest in irrigation works or take measures to prevent soil erosion as the time is too short for that person to benefit from the investment. The tenure is insecure for long-term investments even if it is secure for short-term ones.

The importance of long-term security has led some to argue that full security can arise only when there is full private ownership (e.g., freehold) as, under such tenure, the time for which the rights can be held is not limited to a fixed period. It is argued that only an owner enjoys secure rights, and holders of lesser rights, such as tenants, have insecure tenure because they are dependent on the will of the owner. It is then implied that security of tenure comes only with holding transfer rights such as the rights to sell and mortgage. Equating security with transfer rights to sell and mortgage is true for some parts of the world but it is not true in many others. People in parts of the world where there are strong community-based tenure regimes may enjoy tenure security without wishing to sell their land, or without having the right to do so, or having strictly limited rights to transfer (e.g. transfers may be limited to heirs through inheritance, or sales may be restricted to members of the community).

The sources of security may also vary from context to context:

- An important source is the community and its specific groups such as local farmers' organisations and water users' associations. When neighbours recognise and enforce a person's rights, that person's security increases. In many customary tenure arrangements, people gain property rights through membership of social communities. Maintaining property rights validates membership in the group just as much as membership facilitates the acquisition and safeguarding of property rights.
- Governments represent another source of security as they may provide political recognition of some rights.
- Another source may be the administrative state and the formal legal system. The state may provide security in general by affirming the rights that people hold as well as through specific measures such as providing protection against trespass. Security is often seen to come from protections provided through land registration and cadastral systems.

The total security enjoyed by a person is the cumulative security provided by all sources. In many cases, increasing security from one or more sources will result in an increase in total security. In many development projects, providing or improving legal security is considered the most important way of increasing security of tenure. Examples of land tenure reforms include the upgrading of informal rights to legally enforceable rights; the upgrading of state-issued permits to leases that provide greater protection to the land users; the introduction of provisions for communities to become the legal owners of their traditional land holdings instead of the rights being vested in the State; and better definition of property rights through improvements to formal land administration systems. Rights may also be reduced or eliminated if the state starts to enforce existing rules that prevent access to resources. For example, more rigid enforcement of state policy on forest conservation may result in villagers being evicted from land which they have been using for agricultural and grazing purposes.

Tenure insecurity may be caused by social changes. HIV/AIDS, for example, is impacting the security of women in parts of Africa. Widows may lose access to land in a legal sense if they are unable to inherit rights from their husbands, and in a practical sense if they are forced off the farms by male relatives⁷.

⁷ <http://www.fao.org/docrep/005/y4307e/y4307e05.htm>

Preparations

Concepts and definitions of ownership and rights over land should be established locally. Adequacy of concepts and language to specific population groups should be ensured. Security of tenure should also be defined locally. Shorter term (1-2 years) versus longer-term leases could be distinguished. Generally for longer-term land and productivity investments (soil improvements, irrigation, tree-growing) minimum lease arrangements of 3 or more years are recommended.

Sampling

If data are not available from the municipal cadastre or land register, data can be collected by household surveys. Household surveys are usually done on a sample basis and should –where possible– be statistically representative. Statistical representative sampling may be very hard, given the extreme weakness of local scale statistics, particularly at the sub-urban scale and so drawing a robust sample frame is extremely difficult. Household surveys can be area-based (not pre-identifying agricultural population) or population-based (implemented among a sample of pre-identified agricultural population).

If the research aims to provide an overview of the entire city, a variety of neighbourhoods and areas (urban, peri-urban and rural) will have to be included. Once geographical areas are selected, household number estimates can be deducted from the latest aerial photos, followed by an interval sample (e.g. surveying every 5th or 10th household based on this). Household representativity can be ensured by using a sample frame of 10% of the total number of households.

Acknowledging the relevance of land rights for specific population groups, like migrants or indigenous, cities can also work towards: i) including specific population groups in the survey sample frames; ii) collecting information on ethnicity and background and using it as disaggregation variable for this indicator. Oversampling might be required to guarantee representativeness of such population groups.

Data collection and data disaggregation

Data disaggregation will be done by 1. Gender and 2. Type of tenure.

1. Gender

The indicator is divided in two parts: (a) it measures the incidence of people with ownership or secure rights over agricultural land among the total agricultural population; while (b) it focusses on the gender parity measuring the extent to which women are disadvantaged in ownership or rights over agricultural land. Part (a) and part (b) cannot be seen as two different indicators, they rather provide complementary information. Plus, they can be computed using (almost) the same data. Where gender disaggregated data is available, land may be held either individually or jointly and in cases of joint ownership, a simple arithmetic average over male and female users will be used.

2. Land tenure

In order to disaggregate data by type of tenure, the data collection methodology should always include a question on land tenure. Note again that there are different formal and informal tenure systems around the world and the distinction between legal and non-legal tenure is often blurred. When available, the indicator shall also be disaggregated by documented tenure rights.

The indicator can further be disaggregated spatially (e.g. by area), and depending on other available survey information by age, socio-economic profiles, poverty status, or wealth/income category providing insight into the social equity dimensions including the incidence of land problems and distribution of benefits amongst different social groups and changes in this over time.

With regards to data collection, both existing administrative data (e.g. the municipal cadastre or land registration) and survey data (household and agricultural surveys) will be the main data sources for this indicator. Data can be collected periodically (about every 2-4 years) which is a reasonable frequency to capture significant changes in land ownership.

1. Administrative records

Administrative records are a low-cost way of accessing data. Production of land records and maps is a core function of public registries and reporting on the number of registered parcels or the number and area of parcels mapped is not difficult in principle and, where household surveys are available, can be cross-checked against survey information. Administrative records can be used to provide information on number of households/individuals with formally documented rights. Land registry records provide data on the number of individually registered parcels. This information is in most cases linked to information on land ownership (type of ownership) and information on (the number of) individuals owning the land and is in some cases also disaggregated by gender or type of land use (residential, agric., industry/business). In the case of registered group rights, identifying the number of owners should equally be possible.

2. Surveys

Representative multi-topic household surveys will provide (gender disaggregated) information, separately for residential and non-residential land, on (i) the share of individuals with (specific forms of) secure tenure rights; and (ii) the share of individuals who perceive their rights to be secure.

Data can be extracted from existing World Bank, UN FAO and UN Habitat surveys that provide data on the extent to which plots in the main city or the entire country are registered (see World Bank's 'Doing Business; survey Registering Property Indicator). This is currently being followed up to obtain data on the number of parcels and total area mapped. The World Bank and UN-Habitat also have access to an extensive archive of more than 2,000 nationally representative household surveys (some, such as Urban Inequities Survey, MICS and DHS publicly available), mostly for developing countries at multiple points in time. A review of these indicates that existing surveys in many countries provide information on land access and on agricultural land ownership. Although data are mainly collected at national level, cross-checking with urban/rural and city-level data maintained by UN Habitat is being done⁸. Additional data sets may have been developed by civil society, academia or private sector.

In case new, locally appropriate, surveys have to be developed these should include questions on:

- Socio-economic household data
- Livelihood and income sources
- Land data
- Land ownership
- Forms of tenure
- Security of tenure
- Perceptions of tenure security (Households understanding on whether the documentation that they hold is legally recognised or perceived to be secure).

⁸ UN Habitat has been monitoring security of tenure at urban level for more than 20 years in a sample of 1000 cities worldwide, (as part of Habitat Agenda, Urban Indicators Program (1996-2002) and MDGs/SDGS Slum indicator component 2002-2016). This exercise has been undertaken for data from over 124 countries from the developing regions. The results of this analysis are available in the Urban Indicators database maintained by UN-Habitat. These data were derived from census and survey data that were conducted in the last 10 years. Additional data came from specially designed survey tools (Urban inequities survey) that were implemented in selected countries. UN-Habitat is currently updating this data with other spatial measures, and perceived land rights estimations.

Data analysis/calculation of the indicator

The indicator consists of an outcome indicator, disaggregated by sex and type of tenure as much as possible, namely the share of the total agricultural population who have secure tenure rights to land, by sex. The indicator can be calculated as follows:

Part (a)

$$\left(\frac{\text{People with ownership or secure rights over agricultural land}}{\text{Total agricultural population}} \right) \cdot 100$$

Part (b)

$$\left(\frac{\text{Women with ownership or rights over agricultural land}}{\text{Total owners or rights bearers over agricultural land}} \right) \cdot 100$$

In case the indicator can be disaggregated by type of tenure, the following analysis can be made, namely the share of the agricultural population who have (i) secure tenure rights to land (SecRight); (ii) legal documents to their land (LegDoc); and (iii) perceive their tenure to be secure (PercSec). In cases where information is reported separately for residential and agricultural land (or for different types of agricultural land held by an individual), the index will be aggregated over all parcels with equal weight given to each land use class and parcels weighted by their area share⁹.

Regular reporting on this indicator will inform city governments and non-state actors to what extent municipal (or other subnational) legal and institutional frameworks recognise and support different land tenure categories, and implementation capacity to protect such rights in practice, as well as progress made (allowing assessment of specific outcomes and practical priorities for further improvements), in order to identify the scope for additional action required, and provide for equity between men and women in rights to hold, inherit and bequeath land. It hopefully also leads to greater readiness to engage with multiple stakeholders in data analysis and in achieving better understanding of the strengths and weaknesses of existing land governance policies and practices.

⁹ See footnote 1.