



Food and Agriculture
Organization of the
United Nations



Milan Urban Food Policy Pact Monitoring Framework

July 2018 version

Indicator 35: Presence of a development plan to strengthen resilience and efficiency of local food supply chains logistics

MUFPP framework of actions' category: Food supply and distribution

The indicator allows for (self) assessment of the presence, functioning and effectiveness of a development plan to strengthen resilience and efficiency of local food supply chains logistics. It also helps to define areas for improvement.

Overview table

MUFPP Work stream	Food supply and distribution
MUFPP action	Support improved food storage, processing, transport and distribution technologies and infrastructure linking peri-urban and near rural areas to ensure seasonal food consumption and reduce food insecurity as well as food and nutrient loss and waste with an emphasis on diversified small and medium scale food businesses along the value chain that may provide decent and stable employment.
What the indicator measures	The indicator allows for (self) assessment of the presence, functioning and effectiveness of a development plan to strengthen resilience and efficiency of local food supply chains logistics. It also helps to define areas for improvement.
Which variables need to be measured / what data are needed	Information is collected on Presence (yes/no), as well as a set of metrics and variables indicated below. Details of relevant existing development plans, by type; the list of metrics above; can be conducted as a complementary audit study
Unit of measurement <i>(i.e. Percentages, averages, number, etc.)</i>	Metrics proposed include: <ul style="list-style-type: none"> - Number (by type) of relevant developments plans - Number (by type) of different stakeholders involved with i) developing and ii) implementing plans - Number (by type) of food businesses involved - Number of meetings held in relation to developing the plan(s) - Number of i) municipal departments; and ii) municipal staff involved - Amount (and sources) of budget - Number (by type) of initiatives/actions taken by the multi-stakeholder body to implement the plan (including any funding or other support provided by local government)

Unit(s) of Analysis <i>(i.e people under 5 years old, etc.)</i>	See above
Possible sources of information of such data	-Municipal funding proposals and reports; -Municipal Agriculture, Food Supply Chain and Markets departments; -Development agencies and support organisations; -NGO's; -Food system labour organisations; -Colleges and universities; -Key stakeholders e.g. leading scientists and researchers; food entrepreneurs and innovators; processing, wholesale and distribution companies; food governance bodies; local food support initiatives
Possible methods/tools for data-collection	-Desk top study of existing reports and documents -Interviews with key stakeholders
Expertise required	Research, design delivery and analysis of interview data
Resources required/ estimated costs	
Specific observations	There may be one single plan or there may be several plans that have elements of the local food system included. Each city will need to decide whether to focus only on projects and plans supported by the municipality or to look wider.
Examples of application	

Rationale/evidence

Purpose: The overarching purpose of this area of work is to improve and optimise local/regional food processing, storage and distribution capacity. This is important because the city i) provides a potential market place for food producers in and around the city (the scale and distance depending on the specifics of the city region), and ii) benefits from access to local/regional produce for economic, social and environmental sustainability reasons. Optimising local supply also relates to building regional food system resilience. If the local supply chain is unable to optimise its capacity due to insufficient infrastructure that would otherwise enable flows of food into the city, then this is an area that should be addressed.

Resilience and local food systems: Much has been written over the past few decades about the role that local food systems can play in increasing food security and food system resilience: travels less, is fresher, therefore more nutritious; provides local jobs etc. This is often presented as a counter argument for the mainstream 'just in time' distribution system that currently dominates and is actually quite vulnerable to disruptions caused by man-made or natural crises. Recent examples include the impact of Storm Sandy on the city of New York in 2012 where floods prevented food and drink deliveries for several days. Another example is the UK truck driver protests over fuel prices in 2000 when supermarkets shelves were left bare and emergency food rationing was used in some places.

Oliver de Schutter, (UN Special Rapporteur on the right to food, 2008-2014) drew attention to how food prices, increasingly volatile since 2008, have raised serious food availability concerns in developing countries and called for priority investments in agro ecological and poverty-reducing forms of agriculture. Mitigating the exposure of vulnerable populations to food price volatility means avoiding excessive reliance on trade, and ensuring resilient local food production systems. De Schutter also comments:

- "Food democracy must start from the bottom-up, at the level of villages, regions, cities, and municipalities"
- "Food security must be built around securing the ability of smallholder farmers to thrive"
- "Respect for their access to productive resources is key in this regard"

- “By 2050 more than 6 billion people – more than two in three - will live in cities. It is vital that these cities identify logistical challenges and pressure points in their food supply chains, and develop a variety of channels to procure their food, in line with the wishes, needs and ideas of their inhabitants.”
- “Emerging social innovations in all parts of the world show how urban consumers can be reconnected with local food producers, while at the same time reducing rural poverty and food insecurity, such innovations must be supported.”¹

Role of the city: The city, as a crucial market place, therefore needs to provide support for improved food storage, processing, transport and distribution technologies and infrastructure linking peri-urban and near rural areas. The presence of a development plan to strengthen resilience and efficiency of local food supply chains logistics is one way to assess whether or not this support is happening. However, of course it is not just the presence, but also the implementation of such a plan that matters.

Such a plan could be part of a municipal or regional development plan, or it could be more related to innovation and scientific research of city institutions.

For example in Curitiba, Brazil, a development project includes support for distribution of regional production, as well as creating a culture of consumption of these products, including a brand that enables traceability.

The municipality of Milan, Italy, has guidelines to support social, technological and organisational innovation in processing, distribution, logistics and trading activities to facilitate the transition to a sustainable food system. It aims to promote the development of Milanese agri-food scientific research that relates to the urban system and to encourage the development of innovative projects in the agrifood sector.

Glossary/concepts/definitions used

Logistics and supply chain management: An article from Michigan University provides the following useful definitions. The terms logistics and supply chain management are sometimes used interchangeably. What is considered supply chain management in the United States is more commonly known as logistics management in Europe. Purchasing, materials handling, logistics, transportation, inventory control and supply chain management have continued to evolve, causing many of these functional areas to intersect with one another. While these two terms do have some similarities they are, in fact, different concepts with different meanings. Supply chain management is an overarching concept that links together multiple processes to achieve competitive advantage, while logistics refers to the movement, storage and flow of goods, services and information within the overall supply chain. One process cannot exist without the other.

There are some key differences between the two terms:

- Supply chain management is a way to link major business processes within and across companies into a high-performance business model that drives competitive advantage.
- Logistics refers to the movement, storage and flow of goods, services and information inside and outside the organization.
- The main focus of supply chain is competitive advantage, while the main focus of logistics is meeting customer requirements.

¹ Democracy and diversity can mend broken food systems - final diagnosis from UN right to food expert, Olivier De Schutter, 2014
<http://www.srfood.org/en/democracy-and-diversity-can-mend-broken-food-systems-final-diagnosis-from-un-right-to-food-expert>

- Logistics is a term that has been around for a long time, emerging from its military roots, while supply chain management is a relatively new term.
- Logistics is an activity within the supply chain. (Michigan State University) ²

Supply chain efficiency and effectiveness: PLS Logistics Services provides a useful definition. Supply chain efficiency is an organization's core standard of performance. Efficiency measures the ratio of work performed in a process and whether the process is using the best practices and making the most of available resources. Supply chain efficiency doesn't always guarantee effectiveness. A supply chain might efficiently lessen costs, but if the end consumer is unhappy with the product, it's ineffective. An effective supply chain focuses on the outcome and external standards. Well-built supply chains improve margins, support expansion, drive positive consumer experiences, and reduce operating costs. Determining the best way to move a product to its destination takes consideration of optimizing order processing, receiving procedures, outbound schedules, and reverse logistics.³

Local food supply chain logistics: Based on the above definitions, the term 'local food supply chain logistics' is a merger of two functional areas and can be understood to refer to the movement, storage and flow of locally (in or close to the city) or regionally produced goods, services and information to ultimately meet customer requirements. Work in this area might focus on increases in efficiency, effectiveness and economic viability of the actual movement of products from farm to consumer. It might also focus on improving markets or raising consumer awareness. Each city will need to decide on appropriate parameters.

Examples of relevant development plans: These could include all sorts of practical innovations, some with a focus on technical logistical efficiency improvements, others with a focus on innovative business models or infrastructure support that helps to increase access to local produce. For example:

- Farmers markets or street markets
- Local produce festivals and promotions
- Local food sourcing directories and eating out guides
- Food hubs and new physical premises for distribution
- Expansion or improvements to wholesale and retail market locations
- Online platforms that support local food ordering and distribution
- Scientific studies on transport efficiencies, or GHG emission reductions or use of non-fossil fuel powered vehicles
- Improved (small scale) processing and packaging facilities that help increase capacity to deal with more local products
- Circular economy innovation and design for specific locations or businesses or types of products, etc.

Preparations

The team responsible for monitoring this indicator should agree on:

1. Scope, parameters and types of development plans to include (there may be a wide range of initiatives that contribute in different ways to strengthening the resilience and efficiency of local food supply chains logistics; leaders of such projects may not be from local government)

² Is Logistics the same as supply chain management, Eli Broad College of Business, Michigan State University <https://www.michiganstateuniversityonline.com/resources/supply-chain/is-logistics-the-same-as-supply-chain-management/#.Wm8YyoS5z6w>

³ Supply chain management best practices: Efficiency, Effectiveness; PLS Logistics, 2016 <http://info.plslogistics.com/blog/supply-chain-management-best-practices-efficiency-effectiveness>

2. Type of data disaggregation and categories that will be used (see further below)
3. Data collection method (analysis of reports and documents, interviews with key stakeholders)
4. The key stakeholders to interview – people leading work on relevant development plans
5. If interviews are to be used, questions have to be designed. Training of interviewers may be needed.

Sampling

In the case of an audit, the aim will be to gather as much information as possible and to try and interview all key stakeholders i.e. those that are leading work on relevant development plans.

It could also be helpful to do a sample survey of project partners or beneficiaries of any large-scale support initiative to find out more about the impact of the development plan implementation on the local food chain.

Data collection and data disaggregation

Data to help with this indicator may be most usefully collected in the form of an audit. The audit may be more qualitative than quantitative but the following metrics could be explored, the combination of which would provide a good overview of current support. Inclusion of actions taken to implement plans will further strengthen the value of this particular indicator and sub-sets of data.

Metrics (and data disaggregation) proposed include:

- Number (by type) of relevant developments plans
- Number (by type) of different stakeholders involved with i) developing and ii) implementing plans
- Number (by type) of food businesses involved
- Number of meetings held in relation to developing the plan(s)
- Number of i) municipal departments; and ii) municipal staff involved
- Amount (and sources) of budget
- Number (by type) of initiatives/actions taken by the multi-stakeholder body to implement the plan (including any funding or other support provided by local government)

Data can be collected from existing documents, funding proposals, reports and registers (economic or market department, food business registers, agricultural programmes) followed up by interviews with key stakeholders. The interviews could be shaped to ask the same questions in more depth or breadth, depending on what existing data has already been found.

It could also be helpful to do a sampled survey of beneficiaries of any large-scale support initiative to find out more about the impact on the local food chain. This would depend on priorities and resources. (See sampling notes above).

Data analysis/calculation of the indicator

Once the audit is completed, this could form the basis for an overview document that serves as a baseline audit and can be revised on an annual basis. It may also help to identify gaps in support provision, or to identify the extent to which plans on paper are in reality being implemented.

Depending on the type of survey questions used, further analysis of information can be done, for example about location, access of producers to such infrastructure, infrastructure needs and requirements, vulnerability to climate change etc.

References and links to reports/tools

Local Food and economic development: a guide for Local Governments, March 2014

Mayors innovation project; Centre On Wisconsin Strategy, USA

This paper focuses on the roles cities can take to support economic development through the local food economy.

https://www.mayorsinnovation.org/images/uploads/pdf/Food_and_Economic_Development_Brief_updated.pdf