



Food and Agriculture  
Organization of the  
United Nations



## Milan Urban Food Policy Pact Monitoring Framework

July 2018 version

**Indicator 43:** Presence of policies or regulations that address food waste prevention, recovery and redistribution

MUFPP framework of actions' category: Food waste

*The indicator measures presence of policies or regulations that address food waste prevention, reduction, recovery and redistribution of safe and nutritious food for direct human consumption, food waste utilisation.*

### Overview table

<b>MUFPP Work stream</b>	Food Waste
<b>MUFPP action</b>	Collaborate with the private sector along with research, educational and community-based organisations to develop and review, municipal policies and regulations to prevent waste or safely recover food.
<b>What the indicator measures</b>	Presence of policies or regulations that address food waste prevention, reduction, recovery and redistribution of safe and nutritious food for direct human consumption, food waste utilization
<b>Which variables need to be measured / what data are needed</b>	<ul style="list-style-type: none"> <li>▪ Number (and type) of policies and regulations</li> <li>▪ Level of implementation, enforcement, information and communication tools available</li> <li>▪ Number and type of target groups</li> <li>▪ Monitoring, evaluation and update mechanisms</li> <li>▪ Reporting towards SDG 12.3 mechanisms</li> </ul>
<b>Unit of measurement</b> (i.e. Percentages, averages, number of people, etc.)	<ul style="list-style-type: none"> <li>▪ Number (and types) of policies and regulations</li> <li>▪ Number (and type) of information and communication mechanisms and target groups</li> <li>▪ Resources allocated (human, financial) for each measure</li> </ul>
<b>Unit(s) of Analysis</b> (i.e people under 5 years old, etc.)	<ul style="list-style-type: none"> <li>▪ Policies/ regulations related to food waste prevention and reduction</li> <li>▪ Policies/ regulations related to recovery and redistribution of safe and nutritious food for direct human consumption</li> <li>▪ Policies/ regulations related to context-based food waste utilization</li> </ul>

<b>Possible sources of information of such data</b>	-Social protection and welfare local authorities/national reports -Annual reports of organisations that implement recovery and redistribution of safe and nutritious food for direct human consumption -Local solid waste management departments and private haulage companies
<b>Possible methods/tools for data-collection</b>	Policy review and analysis
<b>Expertise required</b>	Policy analysis
<b>Resources required/ estimated costs</b>	
<b>Specific observations</b>	
<b>Examples of application</b>	Examples of country and city initiatives to address food waste prevention, recovery and distribution can be found here: - <a href="https://www.save-food.org/">https://www.save-food.org/</a> - Dubbeling M., C. Bucatariu, G. Santini, C. Vogt and K. Eisenbeiß (2016). City Region Food Systems and Food Waste Management Linking Urban and Rural Areas for Sustainable and Resilient Development. Deutsche Gesellschaft für Internationale Zusammenarbeit / GIZ, RUAF Foundation, Food and Agriculture Organization of the United Nations / FAO. Available from <a href="http://www.ruaf.org/publications/city-region-food-systems-and-food-waste-management-2016">http://www.ruaf.org/publications/city-region-food-systems-and-food-waste-management-2016</a> and <a href="http://www.fao.org/3/a-i6233e.pdf">http://www.fao.org/3/a-i6233e.pdf</a> . - <a href="http://www.milanurbanfoodpolicypact.org/good-practices/">http://www.milanurbanfoodpolicypact.org/good-practices/</a>

### Rationale/evidence

A significant share of food grown for human consumption is never eaten. The Food and Agriculture Organization of the United Nations (FAO) estimates that a third, by weight, of all food produced in the world was lost or wasted in 2009. This level of inefficiency has significant economic, social, and environmental impacts. For example, it results in approximately US\$940 billion per year in economic losses, according to FAO estimates. It exacerbates the pressures on the global food system and increases the risk of food insecurity. And the amount of food lost or wasted translates into about a quarter of all water used by agriculture, requires cropland equivalent to an area the size of China, and is responsible for an estimated 8% of global greenhouse gas emissions. In 2014 the Committee on World Food Security (CFS) addressed Food Loss and Waste (FLW) prevention and reduction in order to promote more equitable and sustainable food systems - based on a report by its High Level Panel of Experts (HLPE, 2014). The 2014 CFS's policy roundtable recommended an enabling environment facilitated through the "food use-not-loss-or-waste" hierarchy (i.e. the prevention, recovery and redistribution of safe and nutritious food to people). The edible and wasted/discarded parts and the inedible parts associated with food (e.g., bones, rinds, pits/stones) take up space in landfills, and contribute to greenhouse gas emissions during decomposition.

Many countries, cities, companies, and other entities can improve insight into how much, why, and where food and/or associated inedible parts are removed from the food supply chain. Achieving the Sustainable Development Goals is engaging all actors of the global food system.

*SDG 12.3 - By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.*

Improved access to information and data availability in the public domain can:

1. Support strategies and prioritize actions to prevent food loss and waste
2. Identify the most efficient ways to prevent safe and nutritious food to be lost or wasted
3. Identify the context-based alternative – for when the resource becomes waste,

And ultimately enhance the design and implementation of food loss and waste prevention, reduction and recycling policies and programmes.

Cities around the world already implement food loss and waste programmes and policies. Riga (Latvia) for example support the programme "From food waste to healthy, off-season food". Getliņi EKO" is an environmentally friendly, high technology ecological waste management company owned by the Municipality of Riga (in its majority) that operates the waste landfill "Getliņi". It is responsible for the collection and ecological management of waste within the Riga waste management area. About 50% of all waste produced in Latvia, or 300'000 tons of waste annually, is transported to "Getliņi". Food waste makes up 41.5% of waste biomass. Food waste is deposited in environmentally safe biodegradable cells. The landfill gas that forms in the cells is channelled to the Getliņi power unit and transformed into energy. A by-product of energy production is heat that is used for greenhouses that are located in the territory of the landfill and operated by "Getliņi EKO". The greenhouses grow tomatoes during the local vegetable off-season and supply Riga municipality's citizens<sup>1</sup>.

The city of Bruges (Belgium) has developed through a bottom-up process a set of guidelines to build a sustainable food policy. Curbing food waste in public organisations is one of the actions highlighted by stakeholders. Food waste reduction in hospitals and healthcare centres presents unique challenges. Therefore, the City of Bruges set out on a programme whose objectives are: to measure and analyse current food waste and its economic impact in four health care institutions in Bruges; to support them in reducing food waste by coaching; to develop and disseminate at least three successful methodologies to reduce food waste in health care institutions; and to raise awareness among health care institutions about food waste, its impact and solutions. Health care institutions are trained to conduct a baseline food waste measurement, then during a one-day workshop, personnel of the healthcare institutions together with food waste experts go through a creative process to develop solutions to their challenges. Each institution's team tests the solution they created under the guidance of experts. After a first test, feedback is gathered among patients and colleagues. Subsequently, impacts of solutions put in place are analysed. The best solutions are then scaled up and evaluated.<sup>2</sup>

### Glossary/concepts/definitions used

**Food Loss and Waste (FLW):** All edible and inedible parts that are discarded or wasted.

FAO (2014) defines **food loss** as 'the decrease in quantity or quality of food'. It refers to agricultural or fisheries products intended for human consumption that are ultimately not eaten by people or that have incurred a reduction in quality reflected in their nutritional value, economic value or food safety.

An important part of food loss is '**food waste**', which refers to the discarding or alternative (non-food) use of food that was fit for human consumption – by choice or after the food has been left to spoil or expire as a result of negligence (FAO, 2014).

**Recovery** of safe and nutritious food for human consumption is to receive, with or without payment, food (processed, semi-processed or raw) which would otherwise be discarded or wasted from the agricultural, livestock, forestry and fisheries supply chains of the food system.

**Redistribution** of safe and nutritious food for human consumption is to store or process and then distribute the received food pursuant to appropriate safety, quality and regulatory frameworks directly

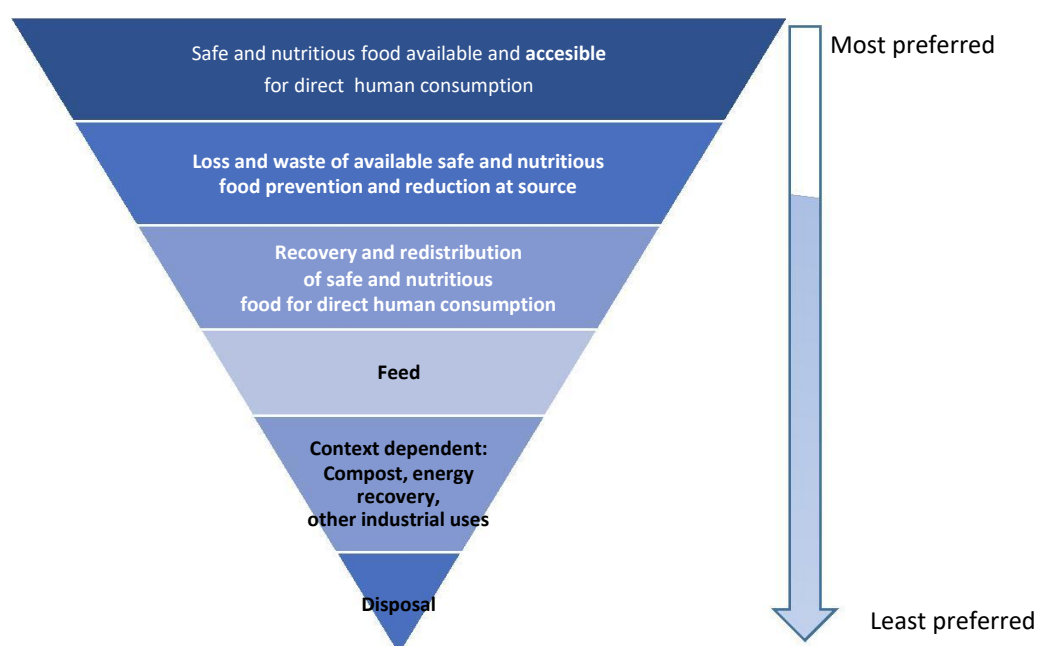
<sup>1</sup> See further: <http://www.milanurbanfoodpolicypact.org/wp-content/uploads/2016/11/MPA-2016-winning-good-practices.pdf> and <http://www.getlini.lv/en/>

<sup>2</sup> See further: <http://www.milanurbanfoodpolicypact.org/wp-content/uploads/2017/10/MPA-winners-2017.pdf>

or through intermediaries, and with or without payment, to those having access to it for food intake (FAO, 2015).

**Policies, regulations, knowledge, norms, standards and data** enable coherent, effective and accountable collective action – with governments and/or local authorities that lead – in consultation and implementation - with actors across civil society and the private sector. These can define goals and targets; develop and implement; share information, experiences, and methods in both bottom-up and top-down monitoring and reporting processes.

**Figure 1. Food-use-not-loss-or-waste hierarchy**



*Source: Adapted from CFS 41, 2014 (Bucatariu, 2016)*

### Preparations

The team responsible for monitoring this indicator should agree on the type of data disaggregation and categories that will be used and the data collection method.

### Sampling:

Given that food loss and waste policies and regulations are still a new area, it is unlikely that sampling will be needed.

### Data Collection and Analysis

During a monitoring/review meeting the following table can be discussed and filled. Specific observations made during the meeting can be added in the final column. Also recommendations for improvement can be added here.

Scoring sheet

Characteristics	Scoring			Total score	Disaggregation of information	Observations/ Recommendations
Presence of policies or regulations that address food waste prevention, recovery and redistribution	Yes= 1 point	No= 0 points			Number and type of policies and regulations	
					Distinguish among prevention, recovery and redistribution	
Level of implementation: is the municipal policy/implementation actually implemented or enforced?	Yes, completely= 2 points	Yes= 1 point	No= 0 points		Discuss for each of the policies or regulations.	
					Indicate reasons for partial or non-implementation/enforcement	
Information and communication: Are policies and regulations widely shared within city government and to potential beneficiaries	Yes= 1 point	No= 0 points			Number and type of information and communication mechanisms and target groups	
Resources allocated (human, financial) – are they adequate?	Yes= 1 point	Yes= 1 point	No= 0 points		Discuss for each of the policies or regulations.	
Total score:						

## References and links to reports/tools

CFS. 2014. Policy recommendations. Food Losses and Waste in the Context of Sustainable Food Systems. Available from: <http://www.fao.org/3/a-av037e.pdf>

Dubbeling M., C. Bucatariu, G. Santini, C. Vogt and K. Eisenbeiß (2016). City Region Food Systems and Food Waste Management Linking Urban and Rural Areas for Sustainable and Resilient Development. Deutsche Gesellschaft für Internationale Zusammenarbeit / GIZ, RUAF Foundation, Food and Agriculture Organization of the United Nations / FAO. Available from <http://www.ruaf.org/publications/city-region-food-systems-and-food-waste-management-2016> and <http://www.fao.org/3/a-i6233e.pdf>.

Guidance on FLW Quantification Methods: Supplement to the Food Loss and Waste (FLW) Accounting and Reporting Standard, Version 1.0.  
[http://flwprotocol.org/wp-content/uploads/2017/06/FLW-Protocol\\_Guidance-on-FLW-Quantification-Methods.pdf](http://flwprotocol.org/wp-content/uploads/2017/06/FLW-Protocol_Guidance-on-FLW-Quantification-Methods.pdf)

Hanson, C., Lipinski, B., Robertson, K., Dias, D., Gavilan, I., Gréverath, P. & Timmermans, T. (2016). Food loss and waste accounting and reporting standard. World Resources Institute: Washington DC, USA, 160. Available from [https://www.wri.org/sites/default/files/REP\\_FLW\\_Standard.pdf](https://www.wri.org/sites/default/files/REP_FLW_Standard.pdf).

Various resources at: FAO. Global Initiative on Food Loss and Waste Reduction. Available from:  
[www.fao.org/save-food](http://www.fao.org/save-food)