

Cali's Food Systems: A Diagnostic Synthesis to Determine Priority Action Areas for Sustainable Food Systems

Applied Learning Experience Report

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Abstract

Food systems are complex and dynamic, and their governance and planning directly affect food security and nutritional outcomes across urban, peri-urban, and rural communities. The production, consumption, and disposal of food has profound effects on economic development, environmental sustainability, and public health. Among food systems, these three domains have important linkages and synergies which are conveyed through public goods and public policy. Identifying the components that make up food systems can be challenging, especially for decision makers who need to understand how changing individual components in the system may have broader implications on food security and public health. Without robust, generalizable data to explain the interconnectedness between these domains, policymakers cannot make evidence-based recommendations that foster sustainable practices. Thus, policymakers need decision support tools to identify specific problem and sites of action to develop sustainable solutions. This project compares the 44 Monitoring Framework Indicators from the Milan Urban Food Policy Pact (MUFPP) to existing indicators in Santiago de Cali's Municipal Development Plan and other governmental reports to measure the city's progress integrating sustainability in its food systems. The MUFPP is a non-binding international protocol aimed at tackling food-related issues at the urban level by having cities share best practices and monitor their progress towards achieving more sustainable foods systems. Preliminary results observed eight indicators that were measured, twenty-five indicators required review or fine tuning, and eleven indicators were missing altogether, pointing to gaps in data and knowledge and potential food system failures. Based on these gaps, a criteria and methodology were developed to determine priority action areas to improve and encourage the use of sustainable practices. (**includes results from methodology**) Cali is not a MUFPP signatory city, change tense but given the upcoming municipal and departmental elections, this rudimentary food systems assessment is an opportunity to present evidence and engage Cali's decision makers and researchers as they develop future political and research agendas related to food security, environmental protection, and economic development.

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Statement of the Problem

Food Systems and Urbanization

More than half of the world's population live in urban areas, and this proportion is expected to rise to 66 percent by 2050 [1]. Rapid urbanization changes how cities are provisioned with food, water, and essential goods and services. This has important implications for human health, environmental wellbeing and resilience, cultural identity, and socio-economic sustainability in the rural-urban continuum [2-4]. Population growth, rising urban incomes and urbanization contribute to the nutrition transition as people consume fewer fruits, vegetables, and whole grains and consume more animal proteins, sugar, fat and oils, refined grains, and processed foods, leading to increases in overweight, obesity, and diet related non-communicable diseases such as diabetes, heart disease, and cancer [3, 5-8]. Simultaneously, low-income populations in urban and rural areas continue to experience undernutrition and have micro-nutrient deficiencies [9, 10]. Rising food demands have environmental impacts on agricultural production systems caused by cropland and pasture expansion and agricultural intensification, the latter replaces natural ecosystems with homogenized crops or pastures, while the former increases land productivity and yield through the use of mechanization, irrigation, fertilizers, and pesticides [2, 11]. Coupled with climatic drivers, expansion and intensification contribute to water degradation, increases in energy use, and unsustainable natural resource management [3, 5, 11]. Other food system drivers that have health, economic, and environmental impacts include food supply, pricing, and marketing; food provisioning via direct-to-consumer markets, restaurants, and institutions; and policy approaches such as food and nutrition standards, land use and zoning laws, subsidies, taxation, and trade [4, 7, 12-14]. When these pressures are combined, they contribute to a cycle of poverty, food insecurity, and malnutrition especially among the urban poor and peri-urban poor. While urbanization occurs in high, medium and low-income countries, responses and interventions to these stressors vary based on the availability and allocation of resources by governance structures. Issues that affected rural areas are shifting to urban and peri-urban regions, thus changing priorities and resource allocation which deepens the

rural-urban divide [3, 4]. (

According to a 2014 Food and Agriculture Organization (FAO) and Gallup World Poll (GWP) study, the prevalence of food insecurity in Andean States and the Caribbean was between 35-50% [14]. The same study noted low levels of education, limited social capital, and living in a country with low GDP per capita were positively associated with food insecurity or severe food insecurity. In Colombia's major cities, micronutrient deficiencies and the rate of stunting among children under five was between four and seven percentage points higher compared to the global average [15]. A Check recency 2010 national survey reported 40% of households experienced some level of food insecurity, while the prevalence of overweight and obesity had increased by 25.6% from what to what? [16], [15]. In Santiago de Cali, the country's third largest city, around 6% of children under five were malnourished, 50-60% of infant deaths were related to malnutrition, and among adults 56% of the population was considered overweight or obese [15]. Cali and the surrounding municipalities have the highest rates of poverty and extreme poverty in Colombia, especially among the population's indigenous and Afro Colombian communities [17]. These groups are more likely to experience the highest levels of social exclusion, economic inequity, and physical displacement from rural to urban areas. Some of this is attributable to violence and civil war, but also to the expansion of sugar cane production which has changed the agricultural landscape from diverse subsistence farming to sugar cane monocultures [18-20].

(Inter)national Government Action

Cities and city-regions have a strategic role in developing sustainable and resilient food systems and municipal governments are actively engaging in local and international dialogue concerning the future of urban food and nutrition security as evidenced in the Milan Urban Food Policy Pact (MUFPP), an international protocol established in 2015 that calls on Mayors of cities worldwide to develop sustainable food practices that: provide healthy and affordable food to all; strengthen and support equitable urban, peri-urban, and rural food production; and promote strategies that reduce food waste and protect the environment [21, 22]. The pact aims to create an evidence base to achieve local development goals, but also operationalizes other international processes such as the Sustainable Development Goals (SDGs) [22].

Currently there are 184 signatory cities which share best-practices and use the MUFPP Monitoring Framework to measure progress towards more sustainable food systems. The FAO and the Municipality of Milan created a draft of the framework which focuses on 44 indicators which are identified in six workstreams: *Governance, Sustainable Diets and Nutrition, Social and Economic Equity, Food Production, Food Supply and Distribution, and Food Waste* [23]. These indicators help characterize the city-region's food systems and are a valuable tool to set baseline measurements, measure the resources needed during program development and those used during program implementation. They identify gaps and opportunities and mobilize internal and external stakeholders to act and share best practices.

While Cali is not a signatory city, there is evidence that suggests that joining the pact may contribute to improving food system policies or processes. Other Latin American cities such as Quito and Medellín are signatory cities. Both have developed effective policies and practices

in multiple workstreams: In 2016, Quito was given a special mention for their practice in the Food Production category, while Medellín's selected practice focused on Governance [24, 25].

In 2018, Jenny Faisury Peña, a research assistant from the International Center for Tropical Agriculture (CIAT) began working on the report, *Indicadores del Sistema Alimentario de Cali* [Indicators of Cali's Food System], which applied the MUFPP Monitoring Framework Indicators to Cali's context. Its purpose was to develop baseline data to begin monitoring and evaluating changes among city-region food systems. The report presented its findings in accordance to the six workstreams defined in the MUFPP along with qualitative and quantitative markers, their respective sources, and recommended actions. The information and recommendations presented in the 2018 document were based on the data available at the time, which proved to be a major limitation, thus this paper attempted to update, and fill gaps identified in the initial report. Mention that there was a skeleton draft

Description of Agency

The International Center for Tropical Agriculture (CIAT) supported this project. CIAT is headquartered in Palmira, Colombia and is one of fifteen different research centers that make up the CGIAR Consortium - a global research partnership focused on reducing poverty, improving food and nutrition security, and encouraging proper management of natural resources.

CIAT's mission is to increase prosperity and improve human nutrition in the tropics through evidence-based solutions in agriculture and the environment. Their vision is to attain a sustainable food future by following their current strategic objectives: providing safe, high-quality crops to consumers by boosting productivity and enhancing the nutritional quality of crops; improving agricultural value chains; and encouraging the implementation of Climate-Smart agricultural practices. CIAT accomplishes this by focusing on three research areas:

Agrobiodiversity, Decision and Policy Analysis (DAPA), and Agroecosystems and Sustainable Landscapes. This project was housed in DAPA under the direction of the Sustainable Food Systems (SFS) team.

SFS is a strategic initiative within CIAT which guides food systems towards an equitable and sustainable future through design and implementation of multi-disciplinary and applied research in collaboration with local, national, and international partners. SFS is also a member of the CGIAR Research Program on Water, Land, and Ecosystems [26]. WLE focuses on providing evidence and solutions on natural resource management to influence key decision makers. Within WLE, the Rural-Urban Linkages (RUL) Research Theme addresses the interlinked challenges of urbanization from a landscapes and territorial perspective. It assesses the performance of city region food systems and of urban and peri-urban agriculture, analyzes climate vulnerability, sustainability dimensions, resource competition and environmental degradation, while identifying innovative ways to turn challenges into policies, strategies and business opportunities. This project was funded through the Water, Land and Ecosystems [26] Research Program.

CIAT's research is made possible by the CGIAR Fund, a multi-donor fund, and grants from numerous organizations including the Colombian Government, regional agricultural research centers, Bill and Melinda Gates Foundation, Australian Government, Canadian Government, German Cooperation, European Commission, Dow AgroSciences, Ford Foundation, Monsanto Fund, USDA, World Bank My activities directly contributed to the ongoing research and work in Cali and the neighboring municipalities.

Methods

The project identified best-practices and standards, and uncovered gaps in knowledge or action regarding the integration of sustainability in the city-region food systems through these key objectives:

1. Described food system stressors by compiling municipal, regional, and national level data from academic reports and government documents.
2. Provided research and policy recommendations by developing a methodology to determine priority action areas in the region's food systems.
3. Explored policy perspectives regarding sustainability in Cali's food systems by conducting key informant interviews. (The analysis is ongoing and will be published in a separate report.)

Diagnostic Synthesis

Based on a preliminary review of existing tools assessing food system sustainability in urban settings, I chose the MUFPP and the 44 Monitoring Framework Indicators as the main tool used to measure Cali's performance regarding sustainable practices. Each MUFPP indicator is linked to a worksheet which provides in depth descriptions of what the indicator measures, the unit of measurement and analysis, how it is measured, tips and tools for data collection and analysis, and examples of its application and rationale for use in a local, regional, and global context. (Appendix A). I created a modified worksheet which provided information on how the indicator was measured in the context of Cali, Colombia. It included what it measured, its application in context, whether the MUFPP indicator was mapped to existing indicators in government reports, where data for the indicator could be sourced from, the organization

responsible for collecting data, and a guide with additional tools or reports included in the worksheet. (Appendix B)

Using the 44 MUFPP indicators, the project identified primary and secondary data sources on existing food system and health indicators for Cali, Valle del Cauca, and Colombia that were being already being measured from municipal, departmental, and national government documents. Although over 20 pertinent documents were identified, the majority of relevant indicators were found in the city's 2016-2019 Municipal Development Plan, the city's Climate Change Adaptation and Mitigation Plan, the city's Resilience Strategy, and the Encuesta Nacional de Situación Nutricional (ENSIN), Colombia's health and nutrition survey, where some data are disaggregated by region, department, and municipality [27-32]. Information were also compiled from CIATs internal library focusing on a 2016 research project titled *Cali Come Mejor*--a series of reports analyzing Cali's food systems. The city published an evaluation of the Municipal Development Plan showing progress achieved between 2016-2018. It included the indicator code, a short description of what each indicator measured, the unit of measurement and analysis, baseline data, target goals, the rate of completion or implementation, and amount of money invested [33]. (Appendix C) **for presentation do example mapping**

With the data that were available, I created a spreadsheet and accompanying word document (Appendix B) which mapped indicators from government documents to the MUFPP Framework indicators. A preliminary scorecard was developed based on indicator results using a green-yellow-red coding scheme. Indicators that were measured or had information which could easily be found were coded green; indicators that were measured but had missing information or were tangentially related to the MUFPP indicator were coded yellow; and

missing indicators or indicators that were not measured at all were coded red. Missing indicators were identified and marked as gaps in knowledge which led to the next step of developing criteria to prioritize indicators for future policy and investigative action.

Methodology on Priority Setting

The next step was to provide recommendations for policy action based on the gaps identified. This required making the indicator mapping diagnostic a practical tool. We decided on criteria for priority setting among Cali's food system indicators which were not mapped to the MUFFP. A search on performance indicators and establishing criteria for priority setting was necessary to develop the criteria.

The initial search hedge through JumboSearch at the Hirsh Health Sciences Library looked for [*prioritization techniques*]. The search was limited to peer-reviewed journals in English and Spanish published between 2000-2019. A second search hedge included other search terms: [*food system**, *sustainable development*, *multiple criteria decision making*, *decision support technique**]. This search hedge yielded 1,412 results. Lastly, a search for [*quality criteria checklists* and *two-by-two tables*] from the Center for Disease Control, the World Health Organization, and other academic sources yielded results that help create a modified strategy grid (Figure 1) measuring indicator feasibility and need. Though many results focused on designing multiple criteria decision analysis processes for priority setting among health problems and health interventions, criteria such as need, feasibility, efficiency, and equity can still be applied to food system indicator prioritization [34-37].

Figure 1. Feasibility/Need Strategy Grid

<p><u>High Need/High Feasibility</u></p> <p>Indicator measures impact on general population but impacts disproportionately affect vulnerable* populations</p> <p>Indicator only measures existence of a policy or program (is a binary answer and does not require extensive research)</p> <p>Indicator is included in a workstream that has access to valid and reliable data sources and maintains multi-stakeholder support in monitoring and evaluation</p> <p>Output indicator is objective and may be easier to interpret</p>	<p><u>Low Need/High Feasibility</u></p> <p>Indicator measures impact on portions of the population or individual sectors/industries</p> <p>Indicator only measures existence of a policy or program (is a binary answer and does not require extensive research)</p> <p>Indicator is included in a workstream that has access to multiple valid and reliable data sources and maintains multi-stakeholder support in monitoring and evaluation</p> <p>Output indicator is objective and may be easier to interpret</p>
<p><u>High Need/Low Feasibility</u></p> <p>Indicator measures impact on general population but impacts disproportionately affect vulnerable* populations</p> <p>Data for indicator are not captured by existing structures and require lengthy data compilation or primary data collection which may be time consuming and expensive</p> <p>Performance indicator relies on subjective expertise, judgement, and perception. May be more difficult to interpret.</p>	<p><u>Low Need/Low Feasibility</u></p> <p>Indicator measures impact on portions of the population or individual sectors/industries</p> <p>Data for indicator are not captured by existing structures and require lengthy data compilation or primary data collection which may be time consuming and expensive</p> <p>Performance indicator relies on subjective expertise, judgement, and perception. May be more difficult to interpret.</p>

* Defined as children and adolescents living in unstable households which may pose a temporary threat to their development; homeless people; victims of family violence and/or sexual abuse; and ethnic or minority groups who are victims of armed conflict.

Much of the literature identified need and feasibility as major criteria for prioritization.

The need criterion focuses on the audience and magnitude of what the indicator measures (giving weight to indicators that measure overall impacts on vulnerable populations); while the feasibility criterion addresses the ease of capturing data for the indicators including

resources, skills, and costs associated with data collection, analysis, interpretation, and monitoring [36]. Other criteria included identifying indicator type and whether indicators were output, or performance based. Other techniques that were considered for this study were found in the CDCs prioritization guide such as the Simplex Method, Criteria Weighting, a modified Delphi Method, and the Nominal Group Technique [36]. Given the absence of stakeholder participation in the report, many of these techniques were not appropriate.

Institutional Review Board and Status

The project intended to improve or assess internal practices and did not constitute as human subject research. The project was approved as a quality assurance/ quality improvement initiative under the Tufts Health Sciences IRB and the CIAT Review Board.

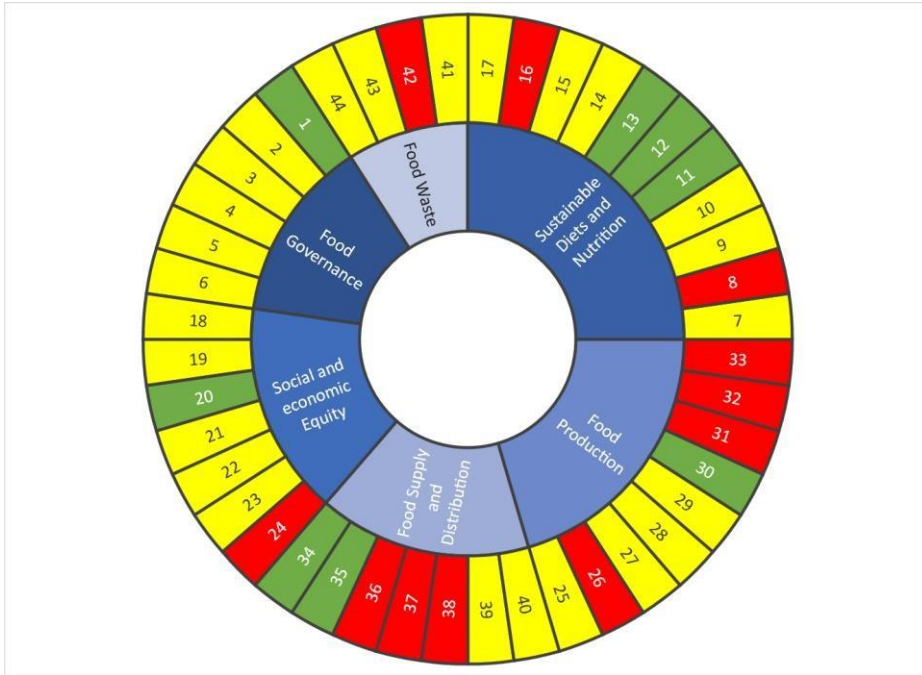
Results

Diagnostic Synthesis

Figure 2 shows eight green indicators, which mapped indicators from government documents to indicators in the MUFFP or identified municipal data needed for those measurements as easily found); twenty-five yellow indicators, which observed indicators from government documents that did not exactly match MUFFP, had missing information, or were tangentially related to existing metrics; and eleven red indicators, which did not observe any matches between indicators from government documents to indicators in the MUFFP.

(For presentation)

Figure 2. Preliminary Results



There were 15 indicators that measured the presence or existence of program, policy, or initiative. These were measured as binary variables--exist or do not exist-- with those in existence being studied qualitatively (*Indicators 1-6, 15, 16, 23, 26, 34, 35, 39, 40, 43*). The workstream which had the strongest representation of matching MUFFP indicators was *Sustainable Diets and Nutrition* while the weakest workstream was *Food Waste* (*clarify what strong and weak representation mean*). The next steps focused on determining priority areas to work on based on the gaps identified.

Do an example of each indicator (GYR). Walk through process.

Methodology on Priority Setting

A modified feasibility/need strategy grid ranked the eleven red indicators. Indicators deemed as high-need and high-feasibility could be identified as priority action areas due to the ease of data collection, analysis and interpretation, and reach. Following the strategy grid, two indicators were identified as high need high feasibility.

Fig. 3 Strategy Grid for Missing Indicators

<p><u>High Need/High Feasibility</u></p> <p>16: Presence of programs/policies that promote the availability of nutritious and diversified foods in public facilities</p> <p>38: Proportion of food procurement expenditure by public institutions on food from sustainable, ethical sources and shorter (local/regional) supply chains</p>	<p><u>Low Need/High Feasibility</u></p> <p>24: Number of opportunities for food system-related learning and skill development in i) food and nutrition literacy, ii) employment training and iii) leadership</p> <p>37: Annual municipal investment in food markets or retail outlets providing fresh food to city residents, as a proportion of total (investment) budget</p> <p>42: Annual number of events and campaigns aimed at decreasing food loss and waste</p>
<p><u>High Need/Low Feasibility</u></p> <p>8: Number of Households Living in Food Deserts</p> <p>33: Annual proportion of urban organic waste collected that is re-used in agricultural production taking place within municipal boundaries</p> <p>36: Number of fresh fruit and vegetable outlets per 1000 inhabitants (markets and shops) supported by the municipality</p>	<p><u>Low Need/Low Feasibility</u></p> <p>26: Presence of municipal policies and regulations that allow and promote agriculture production and processing in the municipal area</p> <p>32: Proportion of local/regional food producers that sell their products to public markets in the city</p>

Discussion

This project aimed to update the 2018 report by using indicators and metrics included in Cali's 2016-2019 Municipal Development Plan, the ENSIN survey, the Climate Change Adaptation and Mitigation Plan, and the city's Resilience Strategy yielding preliminary results which identified and color-coded indicators as green-yellow-red. Few indicators in the Municipal Development Plan are directly mapped to the MUFPP (coded green), but many are tangentially related (coded yellow). The indicators in yellow may be indicative of data being collected for sectors outside food systems, but that could be applied for sectors within food systems. It may also be indicative of work that is already being done in one sector but requires further data collection and analysis within the sector (*i.e. Indicator 41,35*). Data for these indicators may exist at a national or regional level and may be adapted for the municipal level (*i.e. Indicator 9*).

Indicators in the Municipal Development Plan that are not mapped to the MUFPP (coded red) may be considered high priority, but will require more extensive research, data collection, and analyses. It should be noted that the absence of some indicators (specifically the ones assessing presence or existence of a certain policy, program, or mechanism) could easily be mapped by including it as a metric in future development plans and may not warrant extensive research.

Looking at Cali's status across the six workstreams identified in the MUFPP, the streams that had the highest match or the had information which could be easily found in the city's documents and reports were *Governance* and *Sustainable Diets and Nutrition*. Information on sustainable diets and nutrition could easily be found at the national and regional level but require more disaggregation at the local level. However, the biggest gaps were those which relied on the definition of sustainability. Information on social and economic equity was available, though it

has not been quantified in detail in the food sector/service area. Specific information and data for food production were missing. Metrics on food supply and distribution exist but further research is needed. The *Food Waste* workstream is lacking the most information.

What will CIAT do with this? How will they disseminate?

Limitations

A main limitation was the application of a singular international framework. There are many sustainability assessment tools available and a more rigorous study could identify and tailor an assessment to suit the needs for this community. Furthermore, since this was a cursory assessment, multiple components of the city-region's food systems were out of scope or lacked data such as: consumer perspectives, the relationship between food sovereignty and food and nutrition security, and the concept of sustainable food systems as a method to support healthy diets. This tool did not measure gatekeeper reliability, rather it lists who should be responsible for keeping data up to date. In terms of the methodology for determining criteria and priority setting this project did not assess existing tools or make recommendations on using or changing tools to measure multiple metrics nor did it include multi-stakeholder participation when determining criteria. Lastly, this report does not assess indicator quality or make recommendations on how to change or improve indicators for MUFPP or for municipal documents.

Conclusions/recommendations

Based on gaps identified there are many recommendations for future research studies, including food asset mapping to visualize the food landscape (*indicators 8, 21, 24, 25*); qualitative and quantitative data collection, and analysis (*indicators 9, 10, 28, 32*); research on

government procurement and contracts with food service providers (*indicators 16, 38, 18, 23, 24, 26, 33, 36, 37*); compiling, maintaining, or updating a food systems inventory (*indicators 4, 14, 22, 42, 43*). Policymakers should consider capturing metrics that are not currently captured in existing development plans (e.g. health indicators for the elderly population; information on the informal agriculture and food sector in terms of employment, social protection, and regulatory enforcement). Governmental and non-governmental entities should build capacity for monitoring and evaluation for new policies, programs, and food policy councils and should assess existing evaluation resources. The current and incoming administration should consider becoming members of sustainable food system networks to gain technical and financial support and learn about standards and practices used in cities across the world. In terms of criteria setting, I recommend policymakers revisit the different prioritization techniques which call for multi-stakeholder involvement as this may give a more accurate representation of the feasibility and need of collection data for the missing indicators.

Acknowledgments

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Appendices

Appendix A – MUFPP Indicator Worksheet



Food and Agriculture
Organization of the
United Nations



Milan Urban Food Policy Pact Monitoring

Framework Draft version, July 2018

Indicator 1: Presence of an active municipal interdepartmental government body for advisory and decision making of food policies and programmes (e. g. interdepartmental food working group, food policy office).

MUFPP framework of actions' category: Governance

The indicator allows for (self) assessment of the presence, multi-stakeholder representation and integration, functioning and effectiveness of an interdepartmental/sectoral food coordination body or mechanism. It helps identify areas for improvement.

Overview table

MUFPP Work stream	Governance – Ensuring an enabling environment for effective action
MUFPP action	Facilitate collaboration across city agencies and departments and seek alignment of policies and programmes that impact the food system across multiple sectors and administrative levels, adopting and mainstreaming a rightsbased approach; options can include dedication of permanent city staff, review of tasks and procedures and reallocation of resources
What the indicator measures	The indicator allows for (self) assessment of the presence (yes or no), multistakeholder representation and integration, functioning and effectiveness (with use of a scoring sheet) of an interdepartmental/sectoral food coordination body or mechanism. It helps define areas for improvement.

Which variables need to be measured / what data are needed	Information is collected on Presence (yes/no); Multi-stakeholder Representation and Integration; Functioning and Effectiveness. Variables and criteria used for self-assessment are indicated in the scoring sheet below.
Unit of measurement <i>(i. e. Percentages, averages, number of people, etc.)</i>	Not applicable. This indicator will be assessed in a qualitative way.
Unit(s) of Analysis <i>(i. e people under 5 years old, etc.)</i>	Not applicable. This indicator will be assessed in a qualitative way.
Possible sources of information of such data	<ul style="list-style-type: none"> -Self-assessment among representatives participating in the coordination body. Possibly validated by assessment of external actors. -Minutes/ reports of the food working group/ programme -External evaluation and study reports
Possible methods/tools for data-collection	<ul style="list-style-type: none"> -Group discussion for self-assessment, most likely the cheapest approach – External evaluation -Ad hoc surveys to capture opinions of stakeholders and target groups -Key informants interviews
Expertise required	None for the self-assessment
Resources required/ estimated costs	For the self-assessment: Low to none, assessment can be implemented during a meeting of the coordination body
Specific observations	Any self-assessment is by nature not objective. This self-assessment first and for all seeks to enable a joint learning process of stakeholders involved and enable the improvement of the interdepartmental body (functioning, planning and delivery). Furthermore, collecting and analysis of information done collectively contributes to a capacity development process.
Examples of application	<p>The city of Ede (The Netherlands) has created a dedicated municipal food team of 5 people and appointed the first food councillor in the Netherlands. The team is responsible for operationalising Ede's food strategy. In 2017, an external evaluation was asked to assess the functioning of the team and the implementation of the strategy. Applying amongst others a qualitative assessment, some of the findings of the evaluation where:</p> <ul style="list-style-type: none"> -Having a well-staffed food team and corresponding budget is crucial to implementation of the food strategy. -Establishment of various partnerships with other (municipal) parties that contribute to the implementation of activities has laid an important foundation for a true integral vision and anchoring in the Ede society. -However, The "Why" of the Food vision and the integral nature of the Food programme's work are currently insufficiently visible in internal and external communication. A good communication strategy needs to be developed. – Current human and administrative support will need to be better anchored in permanent structures and budgets.

Rationale/evidence

The Milan Urban Food Policy Pact encourages interdepartmental and cross-sector coordination internal to city governments¹, working to integrate urban food policy considerations into social, economic and environment policies, programmes and initiatives, such as, inter alia, food supply and distribution, social protection, nutrition, equity, food production, education, food safety and waste reduction.

Such interdepartmental and cross-sector institutional mechanisms or bodies (food bodies, units or teams), will enhance dialogue and coordination, policy integration, impacts, and efficiency gains by ‘breaking down institutional silos’. Analysis of various successful examples of such coordination mechanisms shows that key government actors include authorities that are responsible for: agriculture, health/nutrition, social protection, economic development, markets, planning, transport, and climate change².

It should be noted that mere presence of an interdepartmental/sectoral coordination body (yes or no) will not provide sufficient indications on actual levels of coordination, results-impacts and gains. It will therefore be important to also assess the functioning and effectiveness of the coordination body (e.g. is it having *regular meetings*; does it have *sufficient human and financial resources* to make sure that the coordination body/mechanism functions; does the coordination mechanism actually *result* in concrete collaboration initiatives and city policies; are the functioning of the coordination body, its activities, results and impacts *monitored* to drive analysis of lessons learned and impacts as a basis for further planning and improvements).

Successful examples also highlight that clear and strong *institutionalisation* of the coordination body/mechanism in the local government structures and budgets, reduces the risks of changes in city administration and shifts in allocation of budgets and is key to mainstreaming food in municipal policies. Securing the food body and programmes through legislation also makes them more resilient to government changes.

Finally, and in order to gain broader political and public support, *transparent information sharing* on the roles, activities and achievements of the coordinating body/mechanism will be crucial.

Glossary/concepts/definitions used

Presence of a municipal interdepartmental government body for advisory and decision making of food policies and programmes: Whether the municipal government has set up a formal or informal structure that is responsible for advisory and decision-making regarding the formulation and/or implementation of food policies and programmes, and thus has a formal mandate to promote coordination across line departments and sectoral programmes.

¹ This call for coordination can be expanded to engagement of other levels of government (vertical integration) and nongovernmental stakeholders (civil society, research organisations, private sector) in forming, implementing and assessing food policy. Note that these levels of coordination are also covered in Indicator 2: *Presence of an active multi-stakeholder food policy and planning structure (e.g. food policy councils; food partnerships; food coalitions)*.

² See the following reports: <http://www.milanurbanfoodpolicypact.org/good-practices/>; <http://www.ruaf.org/publications/city-region-food-systems-and-food-waste-management-2016>; <http://www.ruaf.org/urban-food-policies-and-programmes-overview>.

Depending on the city, interdepartmental/sectoral coordination bodies/mechanisms on urban food policies and plans, have various denominations. These vary from a *food policy office* (e.g. the Comune di Milano has recently established a Food Policy Office called "Ufficio Segretariato del MUFPP e Coordinamento Progetti Food Policy), a *municipal food unit or secretariat* (The city of Belo Horizonte, Brazil created a Municipal Secretariat for Food Policy and Supply- SMAAB with the objective to develop an integrated urban policy for food security and to coordinate all food policies and programmes towards achieving the city's overall goal: increasing the Right to Food and access to healthy food by all its citizens). The creation of the SMAAB, with a separate administrative structure and budget, mainstreamed food security into the municipal public policy), a *food team* (as in Ede, The Netherlands) or an *interdepartmental working group* on urban food issues.

Multi-stakeholder representation and integration: Extent to which different departments and sectors within the municipal government are a member of the coordination body/mechanism. Extent to which the body coordinates and interacts with other levels of government and non-governmental stakeholders (including CSOs, NGOs, private sector, academia etc.)

Functioning and effectiveness of the coordination body/mechanism: A government supported structure that is well functioning, ensures coherence of urban food policy and programme interventions to avoid duplications and gaps across various programmes and stakeholders, and collaborates in the formulation and implementation of cross-sectoral urban food policies and programmes. Criteria used here include: Is the coordinating body adequately staffed? Have partnerships been established? Are there clear mandates/terms of reference? Is it institutionalised within the local government (supported by law)? Does the coordinating body deliver on concrete collaborative initiatives, policies, and impacts? Is the coordinating body properly funded (with a clear own budget, budget for the body and its plans are included in institutional budgets of each of the members); Are there good M&E systems and regular reporting?

Preparations

The following preparations refer to a self-assessment exercise:

1. In case a interdepartmental coordinating body exists: Inclusion of an agenda item on monitoring food governance indicators on the agenda of one of the meetings of the interdepartmental/sectoral coordination body. During this meeting all governance related indicators (1-6) can be jointly discussed by all members of the coordinating body. The monitoring guidelines can be shared with all involved prior to the meeting.
2. In case such body does not exist: the indicator can be reported on by the contact person in the city for urban food policies and the Milan Pact. This person may decide to discuss the indicator and scoring sheet with other stakeholders involved in the formulation and implementation of urban food strategies/policies/projects and action plans. The exercise may contribute to a (future) reflection and planning process on the importance, role and set up of such a coordinating body.

- The internal self-assessment can be validated with selected external stakeholders, especially where mechanisms of information sharing are concerned.

In case other evaluations methods are selected (external evaluation, key informant interviews) respective preparations should be taken.

Sampling

In case of a self-assessment exercise: Preferably all representatives in the coordinating body should participate in the monitoring exercise. They should collectively fill in the scoring sheet provided below.

In addition, a randomly sampled number of both government and non-governmental stakeholders (citizens, research organisations, NGOs Community Based Organisations, private sector) could be asked if they are aware of the existence and roles of the coordinating body (yes/no) and if they have access to information on its existence and performance (yes/no). Such questions could be included in a broader food-related survey. Perceptions of these or of specific stakeholders on other scoring variables could also be sought, if desired.

Data collection and data disaggregation

During a meeting of the coordinating body the following scoring sheet can be discussed and filled. Individual members may first want to make their own assessment before discussing this in the larger group. Alternative, a facilitator could from the start guide group discussion and assessment in an interactive and participatory way. Specific observations made during the meeting (for example on levels of consensus or differences in opinions and scores) can be added in the final column and used for future reference or further discussions. Also recommendations for improvement can be added here.

Scoring sheet

Characteristics	Self-assessment and explanation			Total score	Disaggregation of information	Specific observations / Recommendations
Presence of an interdepartmental/sectoral coordination body on urban food (within the municipality)						
Presence:	Yes =1 point	No=0 points	X A coordinatio n body exists but is	Total score:	Provide information on the type of coordinating body and its focus (only urban agriculture, the	
			set up and managed by nongovernmental stakeholders		broader urban food system).	

Multi-stakeholder representation and integration						
<p>Representation: Representation in the coordinating body of different departments and sectors within the city government</p>	<p>Strong= 2 points Strong: The coordination mechanism has a large representation of different sectors, including a.o. agriculture, health/nutrition, social protection.</p>	<p>Moderate= 1 point Moderate: The coordination mechanism has representation of a couple of sectors</p>	<p>Low= 0 points Low: The coordination mechanism has quite limited representation of different sectors (very few sectors)</p>	Total score:	<p>-List and number of different sectors participating and their roles</p> <p>-List sectors not engaged that could be involved in future</p>	
<p>Vertical integration: The interdepartmental body coordinates actions with other governments at local, national and intergovernmental levels</p>	<p>Strong= 2 points Strong coordination with one or more other levels of government (neighbourhood, province, country) or other municipal governments in the city region</p>	<p>Moderate= 1 point Moderate coordination with one or more other levels of government (neighbourhood, province, country) or other municipal governments in the city region</p>	<p>Weak=0 points Weak coordination with one or more other levels of government (neighbourhood, province, country) or other municipal governments in the city region</p>	Total score:	<p>-List and number of other governments engaged and forms of coordination -List governments/ levels not engaged that could be involved in future</p>	
<p>Multi-stakeholder integration: The interdepartmental body coordinates actions with other non- governmental stakeholders (civil society groups, research, private sector)</p>	<p>Strong=2 points Strong coordination with one or more other non- government stakeholders (civil society, research, private sector)</p>	<p>Moderate= 1 point Moderate coordination with one or more other non- government stakeholders</p>	<p>Weak=0 points Weak coordination with other non- government stakeholders</p>	Total score :	<p>-List and number of other non- governmental stakeholders engaged and forms of coordination --List of other nongovernmental stakeholders not engaged that could be involved in future</p> <p><i>(Note: See further Indicator 2 on Presence of an active multistakeholder food policy and planning structure)</i></p>	

Functioning and effectiveness:

Criteria:

1. It has a clear mandate
2. It is institutionalised in the local government structure
3. It has regular meetings during the year
4. Members actively participate in meetings and decision-making and contribute to the dialogue
5. The coordination body/mechanism has an adequate number of human resources dedicated to the functioning of the coordination mechanism
6. It has adequate financial resources allocated to the functioning of the coordination body/system (Note that funding for implementation of an urban food strategy or programme is covered under Indicator 3).
7. It has regular information exchange; information is widely shared within the city government and with a larger general public on the existence, role, activities and achievements of the coordinating food body
8. It engages in urban food policy/programme formulation; cross departmental/ city initiatives /policies have emerged from the coordinating food body
9. It has power over its members to enforce recommendations and hold them accountable
10. The functioning and activities of the coordination body are monitored, as are results and impacts of its activities to guide further planning and inform on its impacts and policy contributions.

Functioning and effectiveness : The coordinating body is well functioning, ensures coherence of urban food policy and programme interventions and collaborates in the formulation and implementation of crosssectoral urban food policies and programmes.	Strong= 2 points A minimum of 6-10 criteria apply	Moderate = 1 point A minimum of 3-6 criteria apply	Low= 0 points Less than 3 criteria apply	Total score :	Provide information on: -Mandate/ Terms of Reference -Level of institutionalisation: Indicate the policy decision and/or law institutionalising the body and its current statute; indicate levels of integration in institutional budgets and programmes -Number and type of meetings held and agenda points discussed - Staff numbers and time dedicated -Amount and source of budget available for the functioning of the coordination body - Number and types of programmatic collaborations on food (between 2 or more departments) and other city initiatives/policies designed, implemented or planned. -Monitoring mechanisms, tools and reports - Information and outreach mechanisms and target groups

Total score:

Note: For the purposes of these guidelines certain qualifiers and scoring points are defined in the scoring sheet above as to determine an overall score or value of the indicator. Nevertheless, for certain cities some of the qualifiers or scoring levels will be more crucial than others to determine the score of the indicator. Cities could, based on the local context and priorities, identify other or additional key qualifiers or scoring levels to define the overall score of the indicator. For example, one city may decide that the allocation of a budget is the key qualifier to define the functioning and effectiveness of an active municipal interdepartmental government body –and thus given this criterion an additional scoring point-, while another city may consider other qualifiers more relevant for the same indicator. Alternatively a city could decide to score each of the 10 criteria for functioning and effectiveness with 1 point, with a total possible score of 10 points.

In a similar way, a city may decide to give more importance to multi-stakeholder representation and integration and use a more detailed scoring system for scoring these variables: yes= the coordination body is coordinating with specific stakeholders (civil society, private sector, academia/research; specific other levels of government or other municipal governments) = 1 point per stakeholder; no coordination = 0 points.

Data analysis/calculation of the indicator

Based on the scoring and further (disaggregated) information provided, members of the coordinating body may jointly identify areas for strengthening or improvement. Preferably, such action plan would be developed in the same or a following meeting of the coordinating body, during which each of the members confirm their commitments and agree on further (regular) monitoring and information exchange. The self-assessment exercise can be repeated once a year to monitor uptake of agreed improvements/changes.

Appendix B – Modified MUFPP Worksheet

Food Governance

Indicator 1: Presence of an active municipal interdepartmental government body for advisory and decision making of food policies and programs

<p><i>What it measures</i></p>	<p>Assesses the presence of body (yes/no), multi-stakeholder representation and integration, and the functioning and effectiveness of an interdepartmental/sectoral food coordination mechanism. While the indicator only measures the presence of a governing body, a qualitative assessment of the function and effectiveness can be completed to define areas for improvement. Find criteria in the scoring sheet.</p>
<p><i>Application in context</i></p>	<p>At the national level, the <i>Comisión Intersectorial de Seguridad Alimentaria y Nutricional</i> (CISAN) is the coordinating body responsible for the development, implementation, monitoring and evaluation of the national food policy. The Ministry of Agriculture and Ministry of Health preside over the commission while the Ministry of Health is the technical lead.</p> <p>At the departmental level, the <i>Consejo Asesor de Seguridad Alimentaria y Nutricional</i> (CASAN) is the coordinating body responsible for the development, implementation, monitoring and evaluation of the departmental food policy. The Department of Social Development and Participation will preside over the council, while the Secretary of Environment, Agriculture, and Fishing is the technical lead.</p> <p>In 2009, by signing decree 411.0.20.0072, the Mayor of Cali created the <i>Mesa Municipal de Soberanía y Seguridad Alimentaria y Nutricional de Santiago de Cali</i> [Municipal Table for Food and Nutrition Security and Sovereignty]. It functions as an interdepartmental and intersectoral working group which advises and coordinates the formulation of policy focused on food and nutrition security and sovereignty. Its main objectives are to eradicate hunger and malnutrition across Cali, while integrating sustainability into food and nutrition security programming. The working group is comprised of representatives from all levels of government, private industry, NGOs, academia, and civil society. The Secretary of Public Health presides over the group and is also the technical lead.</p> <p>When the <i>Mesa</i> developed the food policy for the city, it called for the creation of a food policy council referred to as the <i>Consejo Territorial de Soberanía y Seguridad Alimentaria y Nutricional</i> (COTSSAN). However, since the policy has not been signed into law, there is no established food policy council.</p>

<i>Recommended indicator:</i>	New indicator needed as there are no existing indicators mapped to the PD. The working group functions by decree and is declared a permanent fixture by law thus it may not require indicators in the PD to reflect its presence.
<i>Source of data:</i>	<ul style="list-style-type: none"> • Self or group-assessment from participating members. • Minutes or reports of food working group. • External evaluation.
<i>Organization responsible:</i>	<ul style="list-style-type: none"> • Secretaría de Salud Pública • Secretaría de Desarrollo Territorial y Bienestar Social
<i>Tools/Reports Included</i>	See worksheet for: <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • Self-assessment of function and effectiveness and scoring sheet

Indicator 2: Presence of an active multi-stakeholder food policy and planning structure

<i>What it measures</i>	Assesses the presence of a planning structure, multi-stakeholder representation, and functioning and effectiveness of a multi-stakeholder mechanism for urban food policy and planning. While the indicator only measures the presence of a planning structure and multi-stakeholder representation, a qualitative assessment of the function and effectiveness of the structure can be completed to define areas for improvement. Find criteria in the scoring sheet.
<i>Application in context</i>	<p>At the national level, one of the instruments established in 2008 by the <i>Consejo Nacional de Política Económica y Social</i> (CONPES) 113, was the <i>Observatorio de Seguridad Alimentaria y Nutricional</i> (OSAN), an observatory under the Secretary of Public Health, which compiles and analyzes data on food and nutrition security, and health. The analyzed data are then shared with the CISAN and corresponding secretaries to inform policy making.</p> <p>At the departmental level, the CASAN is the coordinating body responsible for the development, implementation, monitoring and evaluation of the departmental food policy.</p> <p>At the municipal level, the formation of the <i>Mesa</i> sets a planning structure in place which serves as a forum to discuss food security and sovereignty issues. Diverse stakeholders can discuss threats and opportunities in the food system and develop policies and recommendations to mitigate negative effects. While the <i>Mesa</i> offers one planning structure, it relies on evidence produced by the <i>Plataforma de Diálogo Académico sobre Seguridad Alimentaria y Nutricional</i>,</p>

	<p>an academic and research oriented working group comprised by some <i>Mesa</i> members, as well as other academics and individuals from civil society.</p> <p>In Cali, there is no OSAN but rather university run observatories, such as <i>POLIS</i> from Universidad Icesi and <i>Observatorio Cali Visible</i> from Universidad Javeriana which focus on generating knowledge and assessing general public policies.</p>
<i>Recommended indicator</i>	<p>Since there is currently no functioning OSAN within the city, the city could measure the presence of observatories studying public policy, and the number of studies conducted by other observatories or platforms which are directly or indirectly related to food systems.</p> <ul style="list-style-type: none"> • 42010050004: (Number) Active observatory studying sustainable transportation. • 45010020018: (Number) Design and implementation of an observatory for social policies with a focus on citizen participation. • 45020020020: (Number) Investigations within the framework of the observatory related to issues within public management, good governance practices, and work carried out by the public system.
<i>Source of data</i>	<ul style="list-style-type: none"> • Self or group-assessment from participating members. • Minutes or reports of the food council/partnership/program • External evaluation.
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Secretaría de Movilidad • Departamento Administrativo de Control Disciplinario Interno • Departamento Administrativo de Planeación Municipal • Secretaría de Bienestar Social
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • Example of the Toronto Food Policy Council.

Indicator 3: Presence of a municipal urban food policy or strategy and/or action plans

<i>What it measures</i>	<p>Assesses the presence, level of implementation, and transparency of a municipal urban food strategy/policy and/or action plan with use of a scoring sheet. Additionally, an assessment of the actual strategy/policy or action plan itself may be implemented. This is measured based on the budget amounts and budget sources as well as the number and type of information and outreach mechanisms and target groups.</p>
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<p><i>Application in context</i></p>	<p>In 2008, through the (CONPES) 113, the national assembly establishes a national food policy titled, <i>Política Nacional de Seguridad Alimentaria y Nutricional</i> (PNSAN).</p> <p>In 2018, through Ordinance 480, the departmental assembly approved a departmental food policy titled, <i>Plan de Soberanía, Seguridad Alimentaria y Nutricional 2018-2032 Para el Departamento del Valle del Cauca</i> (PSSAN).</p> <p>In 2009 the <i>Mesa</i> drafted and proposed a municipal food policy titled <i>Política Pública de Soberanía y Seguridad Alimentaria y Nutricional para Santiago de Cali</i> (PPSSAN). The construction of the PPSSAN began in 2009 and when it was presented to the city council the first time it was not approved. Over the next few years the policy was reconstructed focusing on the axes included in the national food policy. In 2017 the <i>Mesa</i> completed an updated technical document, but this time the document didn't reach the city council. In 2018 the policy was presented once again, with minor edits, and is currently being reviewed by the city council whom will make a final decision in late summer 2019. The estimated budget for all programs under the PPSSAN is \$1,273,085,304,911 (COP).</p> <p>While the legal framework concerning Cali's food policy is still in flux, the city has a program under the PD which focuses on food and nutrition security following the strategies outlined in national and international frameworks. This includes reducing hunger, providing mental health services, and providing resources and support to overcome poverty through entrepreneurship and income-generating programs.</p>
<p><i>Recommended indicator</i></p>	<p>New indicator needed as there are no existing indicators mapped to the PD.</p> <p>These indicators show presence of strategies and action plans.</p> <ul style="list-style-type: none"> • 41060020001: (Number) of educational institutions focused on choice and consumption of healthy foods. • 41060020002: (Number) of public enterprises implementing nutrition recovery programs. • 41060020003: (Number) of farmers markets and producer meetings. • 41060020004: (Number) of kitchen or home gardens (focus on hydroponic crops). • 41060020005: (Number) of people from vulnerable populations attended in community kitchens per day. • 41060020006: (Number) of students benefiting from the school feeding program.

	<ul style="list-style-type: none"> • 41060020007: (Number) of adequate centers for collection and distribution of field products. <p>Consider finding a way to integrate the number of agroecological markets (from <i>red de mercados agroecológicos</i>) across the city-region and department.</p>
<i>Source of data</i>	<ul style="list-style-type: none"> • Self-assessment among stakeholders involved in strategy or policy • Minutes/reports on implementation and monitoring if policy, strategy, or plan
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Secretaría de Salud Pública • Secretaría de Desarrollo Económico • Departamento Administrativo de Gestión del Medio Ambiente • Secretaría de Bienestar Social • Secretaría de Educación
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • Example of Ghent’s Food Strategy.

Indicator 4: Presence of an inventory of local food initiatives and practices to guide development and expansion of municipal urban food policy and programs

<i>What it measures</i>	<p>Assesses the presence and use of an inventory of local food initiatives and practices to guide development and expansion of municipal urban food policy and programs. It may spur new development or further develop the existing inventory and propose recommendations. This indicator aims to identify civil society food movements -defined as interventions in the form of initiatives, campaigns, policies, and programs- that show significant results in relation to the development or improvement of a food policy or action plan. It is measured by budget amounts as well as the number and type of users of the inventory (i.e. decision-makers, technical staff, NGO stakeholders). Stakeholders may fill out 'Best Practice' template sheet to report practices.</p>
<i>Application in context</i>	<p><i>“Prácticas comunitarias de producción y distribución de alimentos en zona urbana y periurbana de Cali, 2018”</i> was a report, developed by the Universidad del Valle and funded by CIAT. It presented an inventory of food production and distribution practices in urban and peri-urban areas and the corresponding strengths and weaknesses attributable to different actors along the supply chain. The report found 28 initiatives/programs focused on production and distribution of food in urban and peri-urban areas.</p>

	<p>The Administrative Department of Municipal Planning (DAPM) created an inventory of statistical operations. The inventory contains information related to all processes and procedures developed within the administration. This framework may be helpful in identifying programs or developing a proper inventory of food assets.</p>
<i>Recommended indicator</i>	<p>New indicator needed as there are no existing indicators mapped to the PD.</p> <p>It is recommended to update these 28 initiatives to ensure they are still operational. It is important to identify categories outside the scope of the previous study which may include number of mobile markets, grocery delivery programs, taxes or bans on sugar sweetened beverages (SSBs), and educational workshops.</p> <p>The PD notes the presence of inventories and measures the rate at which these are being updated or the rate at which items are being added. The inventories included are those that record cultural, patrimonial, and environmental assets. One could use existing methodologies for measuring assets from existing inventories at the municipal level. One could also consider looking at existing inventories at a departmental or national level that were out of scope for the previous study. This could be accomplished by having stakeholders in the food policy council or working group complete the template to report a practice found in the indicator worksheet.</p> <ul style="list-style-type: none"> • 41050020020: (Rate) Inventory of assets of cultural interest, updated and registered in the Informational System for Arts and Patrimony (SIPA). • 41050020028: (Rate) Descriptive inventory of cultural real estate, heritage, and architectural interest in the San Antonio neighborhood • 42030020018: (Number) of updated inventory of public green spaces in Cali.
<i>Source of data</i>	<ul style="list-style-type: none"> • Group discussion for self-assessment • Key informant interviews • User surveys
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Departamento Administrativo de Planeación Municipal • Secretaría de Cultura • Departamento Administrativo de Contratación Pública - Unidad Administrativa Especial de Gestión de Bienes y Servicios
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • Scoring sheet • Template to report a practice

Indicator 5: Presence of a mechanism for assembling and analyzing urban food system data to monitor/evaluate and inform municipal policy

<p><i>What it measures</i></p>	<p>Assesses the presence and use of Monitoring and Evaluation (M&E) mechanisms for assembling and analyzing urban food system data. M&E will enable reflection on the experiences gained with urban food policies, impacts achieved, and will inform and improve future municipal food policy making and reporting. Use of the M&E mechanism should be measured by the type of data collected and its use there-of, the level of disaggregation, data accessibility, and by defining the gatekeepers responsible for data collection and dissemination. This indicator measures presence of M&E mechanisms but also calls for a self-assessment of how the data collection and dissemination process is managed using the scoring sheet.</p>
<p><i>Application in context</i></p>	<p>At the national level the CISAN and the OSAN oversee monitoring and evaluation.</p> <p>At the departmental level the CASAN oversees monitoring and evaluation.</p> <p>If the PPSSAN passes, then the COTSSAN would oversee monitoring and evaluation with the help from university observatories and the <i>Plataforma</i>.</p> <p>As itemized in the PPSSAN:</p> <p>Article 11 states, the responsibility to monitor the implementation of this policy is up to the Secretary of Social Welfare and the Secretary of Public Health with assistance from the Observatory of Political Science. They will do so on a trimestral schedule in case preventive or corrective measures are necessary, thus allotting time for the development and design of new tools or methodologies.</p> <p>Article 12 states the responsibility to evaluate the implementation of this policy is up to the Secretary of Social Welfare and the Secretary of Public Health with assistance from the Administrative Department of Planning. They will conduct annual evaluations measuring progress based on pre-defined indicators and objectives using instruments and methodologies designed by these governing bodies. Furthermore a 5 and 10-year evaluation is necessary to determine impacts generated through the diverse interventions built under the framework of this policy document.</p> <p>Article 13 states the instruments and methodologies used will be validated by the secretaries involved in M&E.</p> <p>Article 15 call for the creation of an intersectoral technical advisor charged with supporting and implementing M&E of the policy.</p> <p>The Administrative Department of Municipal Planning (DAPM) created an inventory of statistical operations. The inventory contains information related to all processes and procedures developed within the administration. This could help streamline evaluation processes by rapid identification of policies or procedures.</p>

<i>Recommended indicator</i>	<p>New indicator needed as there are no existing indicators mapped to the PD. Consider existing indicators looking existing observatories in other work streams.</p> <ul style="list-style-type: none"> • 42010050004: (Number) of active observatories on sustainable transportation. • 42040030004: (Number) of monitoring systems studying the cultural environment • 45010020018: (Number) of active observatories focused on social policy and citizen participation using a differential approach. • 45010020019: (Number) active observatories focused on the natural environment as an instrument to monitor natural resource quality. • 45010020002: (Number) of territorial and municipal development plans undergoing monitoring and evaluation.
<i>Source of data</i>	<ul style="list-style-type: none"> • Self-assessment among stakeholders involved in urban food policies/strategies/action plans • Can be validated by external evaluation
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Departamento Administrativo de Planeación Municipal • Secretaría de Movilidad • Secretaría de Bienestar Social • Departamento Administrativo de Gestión del Medio Ambiente
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • Scoring sheet

Indicator 6: Existence of a food supply emergency/food resilience management plan for the municipality (in response to disasters; vulnerabilities in food production, transport, access; socio economic shocks, etc.) based on vulnerability assessment

<p><i>What it measures</i></p>	<p>Assesses the presence and level of implementation of a food supply emergency/food resilience management plan. If desired, assessment of the actual plan itself may be implemented. Information is collected on a vulnerability assessment considering focus, level of integration, transparency, and the development of specific actions (refer to score sheet).</p> <p>An in-depth assessment of the food emergency and resilience plan itself should be completed, this requires information to be collected on justification, vision and objectives, policy measures and instruments, targets and monitoring, institutional framework, and financial resources. Both exercises help define areas for improvement.</p>
<p><i>Application in context</i></p>	<p>At the national level, the National Food and Nutrition Security Plan (PNSAN) 2012-2019 proposes an action plan with the aim of ensuring access to food in cases of events (natural, social, or economic disaster).</p> <p>Cali has developed a comprehensive plan which proposed to strengthen the city’s resiliency in the face of climate change. The <i>Corporación Autónoma Regional del Valle del Cauca</i> (CVC), the <i>Departamento Administrativo de Gestión del Medio Ambiente</i> (DAGMA), and CIAT worked together to create the Plan Integral de Adaptación y Mitigación al Cambio Climático para Santiago de Cali [Comprehensive Mitigation and Adaptation Plan for Climate Change for Santiago de Cali]. This plan understands how climate change can have profound effects on food systems and food security and recognizes the need for risk management strategies and the use of agroecological practices to help guarantee food security. This document lists programs and practices listing base line measurements, specific target goals, indicators, and estimated cost per project, program, or policy.</p> <p>▲ Cali also has a Resilience Strategy, which lists shocks and stressors that directly and indirectly affect food systems such as: crime and violence; displaced populations (internal and external); lack of affordable housing; economic inequality; infrastructural failures; rainfall flooding; fire; earthquakes; and the lack of protection of biodiversity and natural resources. While the document lists policy mechanisms which may make the city more resilient, there is no specific food emergency plan comprehensively integrated into the resilience strategy.</p> <p>The PD does not mention a food resilience management plan, but it does recognize the rise of vulnerable populations including migrants. One way the city responds to this stressor is through emergency feeding programs such as</p>

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	<p>community kitchens and other social assistance programs. The 2018 Análisis de Situación Integrado de Salud (ASIS) reported that as of December 31, 2015, 36.3% of people displaced in Cali were between the ages of 29-60 (where women accounted for 39.2%, men accounted for 34.5%, and youths accounted for 21%). Between 2016-2018 over 1,700 people from vulnerable populations were served at a community kitchen, though this number is presumed to be much higher.</p> <p>100 Resilient Cities and MUFPP</p> <p>Many Latin American cities are undergoing rapid urban development requiring a management plan that will protect natural resources, while promoting economic growth and safety to all ethnic populations and social groups. Quito and Cali face similar shocks and stresses such as earthquakes, fire, economic inequality, infrastructural issues, and rainfall flooding. Medellín and Cali also share similar shocks and stresses such as crime/violence and risk of rainfall flooding. Refer to Quito Resiliente and Medellin Resiliente for information on how the Metropolitan District of Quito and Medellín plan to respond to acute shocks and chronic stresses that afflict the city.</p>
<p><i>Recommend indicator</i></p>	<p>New indicator needed as there are no existing indicators directly mapped to the PD. Developing a composite indicator may make it easier to understand than a battery of separate indicators. However, each indicator should be weighted appropriately to avoid misinterpretations or simplistic conclusions (OECD).</p> <p>The following are indicators in the PD which describe the type of preparedness in terms of plans, funding, target groups and areas, and specific actions.</p> <ul style="list-style-type: none"> • 41060020005: (Number) of people from vulnerable populations attended in community kitchens per day. • 41010030006: (Number) of parents (male or female) or heads of households receiving training on the prevention of risk factors. • 41020010011: (Number) of people with disabilities, or at risk, served by the Community-Based Rehabilitation Strategy – (RBC). • 42020010021: (Project) Relocation of families in the Centro Poblado de Navarro, taking into consideration land use provisions on productive rural housing. • 42050010007: (Number) of risk maps designed and installed by <i>comuna</i>, (administrative division: commune) and <i>corregimiento</i> (administrative division for rural areas) explaining precautions and preventive measure to take in case of natural or man-made disasters. • 42050020001: (Number) of updated and adopted municipal disaster risk management plans. • 42050030002: (Number) of relief agencies coordinating with the municipal administration.

	<ul style="list-style-type: none"> • 42050030003: (Number) of formulated contingency plans for the management of solid waste in case of a disaster. • 42050030004: (Percent) of emergency plans implemented at schools. • 42050030005: (Number) of training days for emergency care preparedness. • 42050030006: (Number) of plans formulated for business continuity and disaster preparedness. • 44010010006: (Number) of displaced victims from the internal armed conflict who are led towards income generating offers. Includes at-risk youth, family members living in poverty, retired and/or injured military veterans, and those disengaged from the work force <p>The <i>Plan Integral de Adaptación y Mitigación al Cambio Climático para Santiago de Cali</i> also has programs and corresponding indicators which may contribute to the development of a composite indicator.</p> <ol style="list-style-type: none"> 1) Conservation and restoration of natural strategic areas associated with the main ecological structure of the area: <ul style="list-style-type: none"> • (Percentage) of improvement from baseline; (number) of relocated homes; (number) of isolated hectares; (number) of hectares in protected areas. 2) Promotion of ECO-neighborhoods strategies – transform neighborhoods into ECO-neighborhoods <ul style="list-style-type: none"> • (Number) of ECO-neighborhoods established; presence of guidebook; construction of rainwater harvesting systems in urban gardens; (number) of homes with LED technology; square meters (m2) of green facades; (number) of active urban gardens; promotion of sustainable local markets and fair trade; carbon footprint; and water footprint. 3) Environmentally friendly food production systems in rural Cali: <ul style="list-style-type: none"> • (Number) of active training sites; number of trained community leaders; (number) of intervention sites by 2020. 4) Agricultural production projects in the city of Santiago de Cali: <ul style="list-style-type: none"> • (Number) of pilot programs implemented; (number) of trained community leaders; (number) of families impacted.
<i>Source of data</i>	<ul style="list-style-type: none"> • Self-assessment among stakeholders involved in the food emergency/resilience plan. • Minutes/reports on implementation and monitoring of the food emergency/resilience plan. • External evaluation and study reports
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Secretaría de Gestión del Riesgo de Emergencias y Desastres • Corporación autónoma regional del Valle del Cauca (CVC)

	<ul style="list-style-type: none"> • Secretaría de Agricultura • Secretaría de Desarrollo Territorial y Bienestar Social • Secretaría de Desarrollo Económico • Departamento Administrativo de Planeación Municipal • Departamento Administrativo de Gestión del Medio Ambiente • Oficina de Resiliencia de Cali
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • Self-assessment and scoring sheet. • References and links to reports and tools.

Sustainable Diets and Nutrition

Indicator 7: Minimum dietary diversity for women of reproductive age (MDD-W)

<i>What it measures</i>	<p>Assesses dietary quality at the individual level, specifically looking at women of reproductive age (15-49 years). It is a proxy for the probability of micronutrient adequacy of women’s diets. The indicator reflects micronutrient adequacy, which is one critical dimension of diet. It does not reflect adequacy of specific target nutrients.</p> <p>Variables measured include a 24-hour recall of food and beverages consumed, disaggregated by food-groups. The MDD-W does not provide comprehensive information on diet quality or impacts of agriculture on diet, nor does it consider an increase in nutrient intake due to fortified or bio-fortified foods. It does not describe diet quality for individual women as it is based on a recall period of one day/night and does not account for day-to-day variability.</p> <p>If desired, also refer to the MDD-YC focusing on young children age 6-23 months.</p>
<i>Application in context</i>	<p>Colombia</p> <p>Information on the nutritional status of women of reproductive age (13-49 years) can be found in the National Survey on Colombia’s Nutritional Status (ENSIN). However, the survey focuses mostly on biochemical markers as a measure of nutrient inadequacies.</p> <p>Based on the most recent ENSIN survey (2015), in Colombia, the prevalence of anemia among women of reproductive age is 7.6%, of which 52.5% are anemic</p>

	<p>due to iron deficiencies. The prevalence of anemia in pregnant women is 17.9%, of which 57.3% are anemic due to iron deficiencies.</p> <p>The ENSIN collects data on minimum dietary diversity (i.e. consumption of at least four different food groups based on a 24-hour recall) among children 6-23 months. However, it does not specify the amounts consumed nor the corresponding nutrient load. The data are disaggregated by department, stratum, and age. Nationally, 36.5% of infants reach the minimum dietary diversity, while 32.6% of infants in the Pacific region reached the minimum.</p>
<i>Recommended indicator</i>	<p>New indicator needed as there are no/irrelevant existing indicators directly mapped to the PD.</p> <ul style="list-style-type: none"> 41030020005: (Number) of pregnant women going to prenatal care for the first time 12 weeks before gestation.
<i>Source of data</i>	<ul style="list-style-type: none"> Household surveys
<i>Organization responsible</i>	<ul style="list-style-type: none"> Secretaría de Salud Pública Instituto Colombiano de Bienestar Familiar (ICBF)
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> Information on data collection, disaggregation, and analysis. References and links to reports and tools. <p>Refer to the FAOs Compendium of Indicators for Nutrition-Sensitive Agriculture and Minimum Dietary Diversity for Women Guide to Measurement which explains the methodological approach to measuring food group diversity in an open recall method -similar to the one used in the national survey.</p>

Indicator 8: Number of households living in "food deserts"

<i>What it measures</i>	<p>Number of households living in “food deserts”. This includes looking at types of food retail establishments (supermarkets, corner stores, mobile markets, <i>fruvers</i>, etc.) It should be measured by distance (km or miles) between households (number or percentage) and food retail establishment that offer a significant quantity of fresh produce or products.</p> <p>The term “food desert” does not have a single definition, but in this context, it refers to specific features of the food environment including geographic access, availability, affordability, and quality. Variables for disaggregation include regional differences, socioeconomic variations, informal urban settlements, and</p>
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	<p>marginalized groups. The USDA defines a food desert based on the percentage of people whose income is at or below the federal poverty level and whose distance to a supermarket or grocery store is greater than 1 mile. A change to this definition is necessary for it to apply to Cali. Distances should vary based on area of settlement (urban vs peri-urban vs. rural); data should be disaggregated by stratum level rather than income; and food retailers should also include public outdoor markets, mobile markets, and <i>fruvers</i> as these carry a high proportion of fresh products.</p> <p>“Food swamp” is another term which refers to low-income neighborhoods who have greater geographic access to food retailers who carry a higher proportion of processed or prepackaged foods.</p>
<i>Application in context</i>	<p>According to a study looking at dietary transitions in Cali, a common barrier to accessing fresh products was distance between household and food retailers. This was a greater problem for residents living in eastern communes and along the hillsides of the city. In the same study, residents also cited the availability and affordability of fast food outlet options and convenience stores selling minimally nutritious food options as a major influence in food purchasing patterns.</p> <p>There has been no food mapping study to date within the city to identify number of retailers, food retail categories, and retailers able to supply a full “meal” based on the national dietary guidelines **link to GABA**.</p>
<i>Recommended indicator</i>	<p>New indicator needed as there are no existing indicators directly mapped to the PD.</p> <p>Gather data on formal food retail establishments from Cali’s Chamber of Commerce (CCC) and the Nacional Association of Merchants [4] to identify types of food establishments (i.e. fast food restaurants, sit-down restaurants, supermarkets etc.) Find geolocation tags if possible.</p> <p>Refer to interactive map from the city’s Planoteca or the Geographic Institute Agustín Codazzi Institute to gather cartographic data on administrative boundaries, cadastres, and transportation.</p> <p>Consider informal food establishments such as mobile markets and vendedores ambulantes.</p>
<i>Source of data</i>	<ul style="list-style-type: none"> • Public health authority inspection data • Planning department business census • Business licensing department records • Land use and GIS maps

<i>Organization responsible</i>	<ul style="list-style-type: none"> • Cámara de Comercio de Cali • Asociación Nacional de Empresarios de Colombia [4] • Infraestructura de Datos Espaciales (IDESC)
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • References and links to reports and tools.

Indicator 9: Costs of a nutritious food basket at city/community level

<i>What it measures</i>	The minimum cost of a diet meeting minimum requirements of macro and micronutrients or food based dietary guidelines. This should include a list of the main food markets, main foods included in a nutritious food basket, unit price of selected foods in local markets, and food requirements for specific age/sex groups of reference households. Costs should be in local currency per person per day.																																																																																					
<i>Application in context</i>	<p>Colombia's dietary guidelines lists recommendations for macro-and micronutrients from six food groups: (1) Cereals, roots, tubers, and plantains; (2) Vegetables and Fruits; (3) Milk and other dairy products; (4) Meats, eggs, and dried legumes; (5) Fats; and (6) Sugars</p> <p>A. Energía y distribución de macronutrientes por AMDR *</p> <table border="1"> <thead> <tr> <th rowspan="3">Grupo de edad</th> <th colspan="3">Energía (kcal)</th> <th colspan="2">Proteína (g)</th> <th colspan="2">Grasa (g)</th> <th colspan="2">Carbohidratos (g)</th> </tr> <tr> <th rowspan="2">Hombre</th> <th rowspan="2">Mujer</th> <th rowspan="2">Promedio</th> <th colspan="2">15% AMDR*</th> <th colspan="2">35% (2-5 años) 30% (6 - > 60) AMDR</th> <th colspan="2">50% (2-5 años) 55% (6 - > 60) AMDR</th> </tr> <tr> <th>Hombre</th> <th>Mujer</th> <th>Hombre</th> <th>Mujer</th> <th>Hombre</th> <th>Mujer</th> </tr> </thead> <tbody> <tr> <td>2 - 5 años</td> <td>1242</td> <td>1150</td> <td>1200</td> <td>45,0</td> <td></td> <td>46,7</td> <td></td> <td>150</td> <td></td> </tr> <tr> <td>6 - 9 años</td> <td>1500</td> <td>1394</td> <td>1450</td> <td>54,5</td> <td></td> <td>48,3</td> <td></td> <td>199,4</td> <td></td> </tr> <tr> <td>10 - 13 años</td> <td>2088</td> <td>1869</td> <td>2000</td> <td>75,0</td> <td></td> <td>66,7</td> <td></td> <td>275,0</td> <td></td> </tr> <tr> <td>14 - 17 años</td> <td>2750</td> <td>2100</td> <td>-</td> <td>103,2</td> <td>78,7</td> <td>91,7</td> <td>70,0</td> <td>378,5</td> <td>288,7</td> </tr> <tr> <td>18 - 59 años</td> <td>2650</td> <td>2100</td> <td>-</td> <td>99,5</td> <td>78,7</td> <td>88,3</td> <td>70,0</td> <td>364,5</td> <td>288,7</td> </tr> <tr> <td>> 60 años</td> <td>2172</td> <td>1895</td> <td>2000</td> <td>75,0</td> <td></td> <td>66,7</td> <td></td> <td>275,0</td> <td></td> </tr> </tbody> </table> <p>* AMDR: Acceptable Macronutrient Distribution Range (Rango Aceptable de Distribución de Macronutrientes). Fuente: Elaboración del CTNGA según documento RIEN. ICBF. Documento Resumen</p>	Grupo de edad	Energía (kcal)			Proteína (g)		Grasa (g)		Carbohidratos (g)		Hombre	Mujer	Promedio	15% AMDR*		35% (2-5 años) 30% (6 - > 60) AMDR		50% (2-5 años) 55% (6 - > 60) AMDR		Hombre	Mujer	Hombre	Mujer	Hombre	Mujer	2 - 5 años	1242	1150	1200	45,0		46,7		150		6 - 9 años	1500	1394	1450	54,5		48,3		199,4		10 - 13 años	2088	1869	2000	75,0		66,7		275,0		14 - 17 años	2750	2100	-	103,2	78,7	91,7	70,0	378,5	288,7	18 - 59 años	2650	2100	-	99,5	78,7	88,3	70,0	364,5	288,7	> 60 años	2172	1895	2000	75,0		66,7		275,0	
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C. Fibra y Micronutrientes

Grupo de edad	Fibra (g)		Ca (mg)		Fe (mg)		Zn (mg)		VIT A (ER)		ÁC Fólico (mcg EFD)
	14g/1000 Kcal		Ambos sexos		Hombre	Mujer	Hombre	Mujer	Hombre	Mujer	Ambos sexos
2 - 5 años	17		600		13		4		350		180
6 - 9 años	20		700		13		5		500		250
10 - 13 años	28		1150		13		6		600		300
14 - 17 años	39	29	1300		17	23	14	7	900	700	400
18 - 59 años	37	29	1000		13	27	14	8	900	700	400
> 60 años	28		1150		13		11		800		400

Como nutrientes críticos de referencia se toman hierro y zinc

Fuente: Elaboración del CTNGA según documento RIEN. ICBF. Documento Resumen.

There are two versions of the dietary guidelines, one for individuals [ages 2 and older](#) and one for [children under 2 and pregnant and lactating women](#). Each provide the recommended Acceptable Macronutrient Distribution Range (AMDR) and recommended amounts of micronutrients.

Both reports include data on consumption and dietary patterns.

Based on 2016-2017 data from the [National Survey for Household Budgets \(ENHP\)](#), which records expenditures in 32 major cities, and 6 intermediate ones, the average person in Cali spends around \$90,000 (COP)(Cuadro 13) on food and non- alcoholic beverages per day. Food items are disaggregated in this survey.

The previous report stated a 4-person household in Colombia would spend anywhere between \$290,000-330,000 (COP) on food items per month [38].

Recommendation indicator

New indicator needed as there are no existing indicators directly mapped to the PD.

This requires a proper assessment on what the nutritious food basket looks like in Cali. A nutritious food basket should be based on the national dietary guidelines but should make sure it reflects what people are consuming at different socio-economic levels, as food baskets may change based on stratum.

This could be calculated using information on the popularity of each food in the group and the amount of each food that is considered one serving. Refer to methodology in tools/reports below.

If using ENHP data, look at average costs of food items or groups per person per day. Using ENHP data, one can calculate, on average, what a person in a household can purchase per day based on food group.

Consider creating a kilogram composites for most foods but also create composites based on the unit a food is purchased (i.e. unit of eggs vs. kg of eggs).

<i>Source of data</i>	<ul style="list-style-type: none"> • Statistics Office • Health Department • Food price monitors • Surveys among different market outlets
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Secretaría de Salud Pública • DANE: IPC, ENHP
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • References and links to reports and tools.

Indicator 10: Individual average daily consumption of meat

<i>What it measures</i>	<p>Individual average daily consumption of fresh or processed meat (includes ruminants, pork, poultry, fish, etc.)</p> <p>Weight of meat consumption should be measured as grams per day per capita OR annual kilograms of meat consumption per capita. One can also measure the proportion of expenditure on meat from total food expenditures.</p> <p>Information can be gathered from household surveys or food frequency questionnaires.</p>
<i>Application in context</i>	<p>Data from an exploratory study shows 53% of households surveyed in Cali from stratum 1 consume meat at least once a day [39]. Due to the price of animal protein, more fresh meat is consumed in higher strata. Among lower strata, fresh cuts of protein are replaced by sausages or canned meats which are more available and affordable [40].</p> <p>Based on ENSIN 2010 ** Link to ENSIN 2010** data, around 17.5% of survey respondents in Cali reported eating processed meats between 5-6 times per week up to 3 times a day. The same respondents report eating red meat and</p>

	<p>chicken between 5-6 times per week and 1-2 times a day (13.1% and 10.5% respectively).</p> <p>Using the 2017 ENHP survey data on expenditures on meat (proteins and products), on average a person in Cali purchases</p> <ul style="list-style-type: none"> • 33.46 grams of boneless beef per day. (n=3,217) • 26.03 grams of boneless pork per day (n=802) • 52.19 grams of chicken or hen (whole or pieces) (n=3,734) • 14.47 grams of fresh/frozen river fish (n=289) • 15.26 grams of fresh/frozen ocean fish (n=164) • 51.60 grams of canned fish or mollusks (n=2,930) • 0.105 grams of processed meats (n=60) <p>This data strictly looks at expenditure which may be a proxy for consumption.</p>														
<i>Recommended indicator</i>	<p>New indicator needed as there are no existing indicators directly mapped to the PD.</p> <p>Expenditure data maybe calculated using ENHP codes for meat products:</p> <table> <tr> <td>1120101</td> <td>Boneless beef</td> </tr> <tr> <td>1120201</td> <td>Boneless pork</td> </tr> <tr> <td>1120302</td> <td>Chicken or hen (whole or pieces)</td> </tr> <tr> <td>1120504</td> <td>Fresh/frozen river fish</td> </tr> <tr> <td>1120505</td> <td>Fresh/frozen ocean fish</td> </tr> <tr> <td>1140103</td> <td>Canned fish or mollusks (sardine, tuna, salmon, clams, etc.)</td> </tr> <tr> <td>1140101</td> <td>Processed meats (longaniza, butifarra, génovas, salchichón, salami, cábanos, patés, etc.)</td> </tr> </table>	1120101	Boneless beef	1120201	Boneless pork	1120302	Chicken or hen (whole or pieces)	1120504	Fresh/frozen river fish	1120505	Fresh/frozen ocean fish	1140103	Canned fish or mollusks (sardine, tuna, salmon, clams, etc.)	1140101	Processed meats (longaniza, butifarra, génovas, salchichón, salami, cábanos, patés, etc.)
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<i>Source of data</i>	<ul style="list-style-type: none"> • Agriculture departments (meat production data) • Health departments or academic institutions (household dietary surveys) 														
<i>Organization responsible</i>	<ul style="list-style-type: none"> • DANE: IPC, EHNP • Secretaría de Salud Pública • Instituto Colombiano de Bienestar Familiar (ICBF): ENSIN 														
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • References and links to reports and tools. 														

Indicator 11: Number of adults with type 2 diabetes

<i>What it measures</i>	<p>Number of adults with type 2 diabetes disaggregated by population group, geography, socioeconomic variables, sex, race/ethnicity. Can be measured as percentage of the population or instances of diagnosed and undiagnosed diabetes.</p>
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<i>Application in context</i>	<p>Based on 2016 national WHO data, 3% of total deaths (for all ages) in Colombia were attributable to diabetes. With a total population of 48,229,000, the prevalence of diabetes among adult males was 7.6%, while for adult females it was 8.5%. The national average for adults was 8.0%.</p> <p>Based on data from a technical document from the Observatorio Nacional de Salud on the burden of non-communicable diseases (pg 110-120), between 2010-2014, Valle del Cauca was one of five departments with the highest prevalence of diabetes among women and men. For women the rate in 2010 was 2.4% while in 2014 it was 2.8%. For men the rate in 2010 was 2.1% while in 2014 it was 2.4%.</p> <p>Based on the city's 2018 Análisis de Situación Integrado de Salud (ASIS), diabetes mellitus was the second leading cause of death from non-communicable diseases. The age adjusted death rate for men observed a decrease from 35.32 deaths per 100,000 men to 21.08 deaths per 100,000 between 2005 and 2016. Among women, the trend varied with the rate in 2005 starting at 25.16 deaths per 100,000 women falling to 18.16 deaths per 100,00 in 2012. However, between 2013-2015, the rate rose to 20.89 before it fell to 15.14 deaths per 100,000 in 2016. The prevalence of diabetes mellitus reported in Cali in 2017 was 3.6% compared to the 3.48% in Valle del Cauca.</p> <p>A 2017 epidemiological profile on individual comunas (22) and corregimientos (15), provides preliminary information on the number of deaths from diabetes mellitus. Data are disaggregated by sex and administrative area. Based on preliminary data from a 2012-2017 study period, the death rate caused by diabetes mellitus in Cali was 1.39% (urban area) and 1.91% (rural area).</p>
<i>Recommended indicator</i>	<p>New indicator needed as there are no existing indicators directly mapped to the PD.</p> <p>There are many sources to find data on prevalence of diabetes on a national and subnational level. However, it should be clarified that data reflect only cases of type 2 diabetes and that 'adult age' is standardized. If possible, ensure data are disaggregated by location, ethnicity, and SISBEN coding.</p>
<i>Source of data</i>	<ul style="list-style-type: none"> • National health department surveillance systems • WHO diabetes country profiles
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Instituto Nacional de Salud (INS) – Observatorio Nacional de Salud (ONS) • DANE - Estadísticas Vitales

	<ul style="list-style-type: none"> • Secretaría de Salud Pública
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection and analysis. • References and links to reports and tools

Indicator 12: Prevalence of stunting for children under 5 years

<i>What it measures</i>	<p>Prevalence of stunting among children under 5 years. Stunting refers to low height for age (months), reflecting past episodes of under-nutrition. Variables measured include data on height and age. Indicator can be disaggregated by sex, household income, and socioeconomic and spatial qualifiers. The unit of measurement is the percentage of stunting among children under 5 years.</p>
<i>Application in context</i>	<p>Colombia</p> <p>Based on preliminary national data from the 2015 ENSIN survey, the prevalence of stunting in children under 5 was 10.8%, a 2.4% reduction from 2010. Prevalence of stunting is similar across Colombia’s six regions, but rates are higher among males compared to females (12,1% and 9.5% respectively); indigenous populations compared to Afrocolombians (29.6% and 7.2% respectively); and children from very low-income households compared to those from low and medium-income households (14.1%, 10,2%, and 8.4% respectively).</p> <p>Cali</p> <p>Based on 2012-2014 data from the city’s Secretariat of Public Health, the prevalence of stunting has increased in Cali from 6.6% in 2012/3 to 7.7% in 2014. The data are not disaggregated by age or sex.</p> <p>The PD lists result indicators which are mapped to the SDG 2 and focus on closing gaps established by the National Development Plan 2014-2018 specific to reducing hunger and malnutrition (code 40). <i>Sistema de Vigilancia Alimentaria y Nutricional–SISVAN en Población Escolar (2017)</i></p>
<i>Recommended indicator</i>	<p>New indicator needed as there are no existing indicators directly mapped to the PD.</p> <p>The city has a list of indicators measuring social development include those related to the nutritional health of children under 5. It has data on the percentage of live births with low birth weight, and prevalence of stunting and underweight in children under 5 years. <i>Ensure data are disaggregated by sex, age, household income, socioeconomic levels, and administrative boundaries.</i></p>

Source of data	<ul style="list-style-type: none"> Public school records Municipal public health records Population surveillance data from WHO National health departments Primary data collection from primary health care providers 												
Organization responsible	<ul style="list-style-type: none"> Secretaría de Salud Pública Instituto Colombiano de Bienestar Familiar (ICBF) 												
Tools/Reports Included	<p>See worksheet for:</p> <table border="1"> <tr> <td>Information on Data Collection and analysis</td> <td></td> <td></td> </tr> <tr> <td>References and links to reports/tools.</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>	Information on Data Collection and analysis			References and links to reports/tools.								
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Indicator 13: Prevalence of overweight or obesity among adults, youth and children

What it measures	Prevalence of overweight or obesity among adults, youth and children. Data on body weight and height measurements, age and sex are necessary. The unit of measurement is the percentage of populations that are overweight or obese. These can be disaggregated by age (birth to <5yrs.; 5-18; >18yrs.)
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Application in context	<p>National prevalence of overweight/obesity by age and sex (ENSIN 2015)</p> <table border="1"> <thead> <tr> <th>Age</th> <th>F</th> <th>M</th> </tr> </thead> <tbody> <tr> <td><5 years</td> <td>5.1%</td> <td>7.5%</td> </tr> <tr> <td>5-12 years</td> <td>23.5%</td> <td>25.3%</td> </tr> <tr> <td>13-17 years</td> <td>21.1%</td> <td>14.8%</td> </tr> <tr> <td>18-64 years</td> <td>59.6%</td> <td>52.8%</td> </tr> </tbody> </table> <p>Prevalence of overweight/obesity by age and region (ENSIN 2015)</p> <table border="1"> <thead> <tr> <th>Age</th> <th>Colombia</th> <th>Pacific Region</th> <th>Cali</th> </tr> </thead> <tbody> <tr> <td><5</td> <td>6.3%</td> <td>5.6%</td> <td>6.5% <i>(Cali Cómo Vamos report)</i></td> </tr> <tr> <td>5-12</td> <td>24.4% <i>overweight (16.9%) obese (7.6%)</i></td> <td>26.7% <i>overweight (18.3%) obese (8.4%)</i></td> <td>34.9% <i>overweight (22.8%) obese (12.2%)</i></td> </tr> <tr> <td>13-17</td> <td>17.9%</td> <td>19.1% <i>overweight (14.0%) obese (4.0%)</i></td> <td>23.4% <i>overweight (17.8%)</i></td> </tr> <tr> <td>18-64</td> <td>56.4% <i>overweight (38.4%) obese (18.7%)</i></td> <td>59.5% <i>overweight (38.4%) obese (21.1%)</i></td> <td>60.0% <i>overweight (37.6%) obese (22.4%)</i></td> </tr> </tbody> </table>	Age	F	M	<5 years	5.1%	7.5%	5-12 years	23.5%	25.3%	13-17 years	21.1%	14.8%	18-64 years	59.6%	52.8%	Age	Colombia	Pacific Region	Cali	<5	6.3%	5.6%	6.5% <i>(Cali Cómo Vamos report)</i>	5-12	24.4% <i>overweight (16.9%) obese (7.6%)</i>	26.7% <i>overweight (18.3%) obese (8.4%)</i>	34.9% <i>overweight (22.8%) obese (12.2%)</i>	13-17	17.9%	19.1% <i>overweight (14.0%) obese (4.0%)</i>	23.4% <i>overweight (17.8%)</i>	18-64	56.4% <i>overweight (38.4%) obese (18.7%)</i>	59.5% <i>overweight (38.4%) obese (21.1%)</i>	60.0% <i>overweight (37.6%) obese (22.4%)</i>
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	+64	N/A	N/A	N/A
<i>Recommended indicator</i>	New indicator needed as there are no existing indicators directly mapped to the PD. Refer to measurements and preliminary data from ENSIN 2015. Find metrics on the elderly population.			
<i>Source of data</i>	<ul style="list-style-type: none"> • Primary collection of individual measurements in school setting for children and youth • Primary health care professionals for adults. • Municipal public health system records; Public school records. 			
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Secretaría de Salud Pública • Instituto Colombiano Bienestar Familiar (ICBF) - ENSIN 			
<i>Tools/Reports Included</i>	See worksheet for examples and rationale.			

Indicator 14: Number of city-led or supported activities to promote sustainable diets

<i>What it measures</i>	Number of city-led or supported activities to promote sustainable diets. Variables include total number of activities or number of people participating in activities. Data can be disaggregated by type of activity and target audience.
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<p><i>Application in context</i></p>	<p>Based on the FAO definition provided in the worksheet, city-led activities that promote sustainable diets “are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimizing natural and human resources.”</p> <p>National, departmental, and municipal level</p> <p><u>Red de Seguridad Alimentaria (ReSA)</u>: This program is run by the Department of Social Prosperity but is operated at a municipal scale. Its goal is to increase access to healthy foods, promote healthy eating habits, encourage subsistence farming, and encourage buying and using local food products to reduce hunger while improving food and nutritional security and sovereignty. This is accomplished by motivating behavioral change, circulating educational information, planning and implementing activities and strategies, and providing inputs and capital to develop home gardens as well as elements necessary for the transformation and consumption of food.</p> <p>In Cali</p> <p><u>Activities focused on protection of biodiversity and ecosystems, and optimization of natural and human resources:</u></p> <ul style="list-style-type: none"> • The climate change mitigation plan focuses on: conserving and restoring lands susceptible to mining, deforestation, and urban development; conserving green spaces within the city and improving management practices; developing green corridors to increase gene flow and maintain biodiversity of flora and fauna between urban, peri-urban, and rural areas; planting trees around the city to reduce the heat island effect; repairing and recovering damaged soils across mountains/hills surrounding the city; and propagating and conserving native vegetation of dry tropical forests using proper management practices. • The climate change mitigation plan focuses on promoting use of recycled materials in manufacturing and establishing best practices regarding waste management and recycling. There is also a focus on preserving surface and groundwater while, using water efficiently, and reducing greenhouse gas emissions from water treatment systems.
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	<ul style="list-style-type: none"> The city also developed an educational program for community members, <i>Proyectos Ciudadanos de Educación Ambiental</i> (PROCEDA), which focuses on encouraging behavioral changes that prevent, correct, compensate and/or mitigate environmental problems in Cali. It's accomplished through educational forums and workshops which connect community members to experts and professionals. <p><u>Activities focused on keeping and ensuring culturally acceptable, accessible, nutritionally adequate, safe and healthy diets:</u></p> <ul style="list-style-type: none"> The climate change mitigation plan focuses on promoting climate-friendly food production systems through rural-urban collaborations and promoting urban agriculture. The climate change mitigation plan focuses on educating and improving institutional capacity to reduce and handle vector-borne diseases. Healthy school stores: Uses pedagogical strategies to teach and empower shop keepers of food retail establishments at school stores across Cali to procure and properly handle fresh and nutritious food. School Feeding Program <i>Programa de Alimentación Escolar</i> (PAE): The program promotes healthy eating habits via educational campaigns while offering supplemental meals to children. <i>Alimentando Sonrisas</i> (Feeding Smiles) is a collaborative program between the city and the archdiocese that delivers food to vulnerable population through community kitchens. Kitchens are run by the same communities they aim to serve, thus offering job training opportunities in food service handling, which can help reduce joblessness and combat poverty. Some community kitchens offer <i>Programas de Recuperación Nutricional</i> (Nutritional Recovery Programs) which target children under six who display signs of stunting or wasting. These kitchens provide supplemental formulas as well as medical and health services to at-risk youth and their families. Breastfeeding programs: These programs promote the proper breastfeeding practices which may be a protective factor against noncommunicable diseases during adulthood [41]. The previous report cited an annual municipal food security forum where the community was able to meet and speak with producers, members of civil society, and public and private stakeholders about food security, nutrition, and sustainability. As of 2016 there were 42 mobile markets in Cali, 6 plazas, and As of 2015 there were 12 agroecological markets in Valle del Cauca which make up the <i>Red de Mercados Agroecológicos</i> (Red MAC)
<p><i>Recommendation indicator</i></p>	<p>New indicator needed as there are no existing indicators directly mapped to the PD.</p>

	<p>In the mitigation and adaptation plan look at work streams (water use and management; biodiversity and ecosystem services; solid and liquid waste; and agroecological systems and climate adaptation) and corresponding actions under the ‘Action Plan’ (p. 68-126).</p> <p>In the PD:</p> <ul style="list-style-type: none"> • 41030010004: (Number) of organizations that promote healthy lifestyles while managing the negative effects, and rising incidence, of non-communicable diseases. • 41010020016: (Number) of public and private educational institutions which promote and offer foods high in nutritional value in their school stores. • 41060020002: (Number) of public enterprises implementing nutrition recovery programs. • 41060020005: (Number) of people from vulnerable populations attended in community kitchens per day.
<i>Source of data</i>	<ul style="list-style-type: none"> • Records from local government departments • NGOs supporting activities.
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Departamento Administrativo de Planeación • Secretaría de Salud Pública • Secretaría de Educación • DAGMA • CVC • Secretaría de Gestión del Riesgo • Secretaría de Infraestructura
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • References and links to reports and tools.

Indicator 15: Existence of policies/programs that address sugar, salt and fat consumption in relation to specific target groups

<i>What it measures</i>	<p>Existence of laws/regulations/policies/programs that address sugar, salt and fat consumption in relation to specific target groups (e.g. general public, hospitals & schools). This indicator measures the number and types of laws, policies and programs; the level of implementation and enforcement; and the number and type of information and communication mechanisms and target groups.</p>
<i>Application in context</i>	<p><i>Acuerdo 0278</i> of 2009 restricts the sale of foods, high in calories and low in nutritional value, in school stores, kiosks, vending machines, and school restaurants in all private and public educational institutions. Furthermore, the agreement states the Department of Education will develop strategies to incorporate healthy and fresh foods in school stores based on the national dietary guidelines. It will also develop and maintain a plan for monitoring, evaluation, and enforcement. This agreement is regulated under the Mayor's Decree 411.0.20.0666 of 2010. This decree also set the stage for developing and implementing a ‘balanced meal program’ across schools.</p>

<i>Recommended indicator</i>	<p>New indicator needed as there are no existing indicators directly mapped to the PD.</p> <p>There are process and output indicators that measure presence and quantity of activities related to the <i>Acuerdo Municipal 0278</i>, but performance indicators are required to qualitatively evaluate success.</p> <ul style="list-style-type: none"> • 41010020016: (Number) of public and private educational institutions which promote and offer foods with high nutritional value in their school stores. • 41030010004: (Number) of organizations that promote healthy lifestyles while mitigating the effects, and rising incidence, of non-communicable diseases. • 41040030011: (Number) of official educational institutions that promote healthy lifestyles and environmental protection, through environmental school projects <i>Proyectos Escolares Ambientales (PRAE)</i>. <p>More information is needed concerning the types of meals and served in hospitals, prisons, and other public institutions.</p>
<i>Source of data</i>	<ul style="list-style-type: none"> • City Council • Health and education departments • School boards/associations • Hospitals • Prisons
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Secretaría de Educación • Secretaría de Salud Pública
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, analysis and calculations • Scoring sheet • References and links to reports and tools

Indicator 16: Presence of programs/policies that promote the availability of nutritious and diversified foods in public facilities

<i>What it measures</i>	<p>Assesses the presence of programs/policies that promote the availability of nutritious and diversified foods in public facilities such as hospitals, health and childcare facilities, workplaces, universities, schools, food and catering services, municipal offices and prisons, and to the extent possible, in private sector retail and wholesale food distribution and markets. This indicator measures the number and types of policies/programs; the level of implementation and enforcement; the type of information and communication mechanisms; and the type of public facilities.</p>
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<i>Application in context</i>	<p>For information on policies and programs supporting healthy diverse diets in schools, refer to indicator 14 and 15, which mention PAE and <i>Acuerdo 0278</i>.</p> <p>For information on mobile markets refer to Decree 429 from 2002 which improves access to lower costs fruit and vegetables to target areas around the city.</p> <p>**Information on procurement and government catering services are unknown at the time. Research is required**</p>
<i>Recommended indicator</i>	New indicator needed as there are no existing indicators directly mapped to the PD.
<i>Source of data</i>	<ul style="list-style-type: none"> • City council public records • Health departments • Education departments, school boards/ associations
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Departamento Administrativo de Planeación • Secretaría de Educación • Secretaría de Salud Pública
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, analysis and calculations • Scoring sheet • References and links to reports and tools

Indicator 17: Percentage of population with access to safe drinking water and adequate sanitation

<i>What it measures</i>	Percentage of population with access to safe drinking water and adequate sanitation. Data can be disaggregated by considering region, socioeconomic variation, informal urban settlements, locally important marginalized groups.
<i>Application in context</i>	<p>2016 data from EMCALI and the DAPM observes 88.4% of Cali's total households have access to safe drinking water, however the data are not disaggregated.</p> <p>The latest report from Cali Cómo Vamos (2019) observed the coverage rate of sewer and water supply systems in the Cali and Yumbo were 99.7% and 98.9% respectively.</p>
<i>Recommended indicator</i>	<p>The city's system on social indicators measuring social development, has one indicator on 'percentage of households with access/service to potable water' under the 'Sustainability' social indicator.</p> <p>In the PD</p> <ul style="list-style-type: none"> • 42060010004: (Number) of water supply systems built in rural areas (water suitable for drinking) • 42060010010: (Percentage) of the municipality with a defined alternative source of drinking water

<i>Source of data</i>	<ul style="list-style-type: none"> Household surveys Institution/ utility records and licensed sanitation emptying service provider
<i>Organization responsible</i>	<ul style="list-style-type: none"> EMCALI Departamento Administrativo de Planeación Municipal DANE Secretaría de Vivienda Social y Hábitat - Unidad Administrativa Especial de Servicios Públicos Departamento Administrativo de Hacienda Municipal
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> Information on data collection and analysis References and links to reports and tools

Social and Economic Equity

Indicator 18: Percentage of food insecure households based on the Food Insecurity Experience Scale (FIES)

<i>What it measures</i>	<p>Severity of food insecurity experience based on the Food Insecurity Experience Scale (FIES), and the percentage people or households experiencing moderate or severe food insecurity. This is an indicator of food access, not diet quality. The data are collected using the FIES Survey module, composed of 8 yes/no questions. The choice of additional variables to collect in the survey will depend on the objective of the survey but should include at a minimum basic demographic information.</p>
<i>Application in context</i>	<p>The ELCSA is another FAO validated tool, similar to the FIES, which measures food insecurity and is implemented in the ENSIN.</p> <p>ENSIN data from 2015 shows around 2% of these households were food insecure while 9.2% were moderately food insecure. The highest prevalence of food insecurity was found in households where women were heads of household, run by individuals with low levels of education, Afro-descendants, and job insecure households [42].</p> <p>Based on 2015 ENSIN data, 54.2% of Colombians experience some level of food insecurity. In the Pacific region that number is higher at 57.4% while 53.6% of the department of Valle del Cauca experience some level of food insecurity. In the Cali metro area, the rate is 51.3%.</p> <p>In Cali, the eastern communes and along the city's hillside, residents have difficulty accessing fruits and vegetables [40]. The concept of "food deserts" is not clearly identified in literature relating to Cali, but in terms of what constitutes a food desert we notice issues with access and availability.</p>
<i>Recommended indicator</i>	<p>New indicator needed as there are no existing indicators directly mapped to the PD.</p>

<i>Source of data</i>	The FIES survey module can be included in many types of surveys including the ENSIN, The National Survey on Quality of Life, and household income and expenditure surveys.
<i>Organization responsible</i>	<ul style="list-style-type: none"> • DANE • Secretaría de Salud Pública • Secretaría de Bienestar Social • Secretaría de Desarrollo Económico
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection and analysis • The FIES Survey Module • References and links to reports and tools

Indicator 19: Percentage of people supported by food and/or social assistance programs

<i>What it measures</i>	The indicator measures the usage of food and/or social assistance support through programs that target vulnerable groups who struggle to feed themselves. Over time, this indicator should show how usage increases or decreases, and speeds up or slows down. Variables measured include: total city population (including figures for vulnerable group)s; number of food assistance programs; types and number of social assistance programs that relate to food security; numbers of people using the assistance programs (or registered to use them); length of time that users are encouraged to participate or eligible for assistance (in weeks or months); percentage of the total city population receiving food or social assistance because they are struggling to feed themselves.
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<p><i>Application in context</i></p>	<p>Population at large:</p> <p>Based on July 11, 2019 census data from DANE, Cali's population in 2018 was 1,822,871. In a one-year period 5,459 people immigrated into Cali from other municipalities in Valle del Cauca, with a majority coming from Buenaventura.</p> <p>2017 data from the Secretary of Social Welfare recorded 10,858 individuals who were characterized as victims of the armed conflict in Cali. Another 2017 dataset reported 3,021 instances of services provided to victims of the armed conflict, of which 1,454 were food <i>bonos</i> worth \$80,000 (COP).</p> <p>The <i>Territorios de Inclusión y Oportunidades</i> (TIO) undersecretariat operates under the Secretariat for Territorial Development and Citizen Participation. Their work focuses on developing and implementing methodologies for territorial interventions which contribute to the reduction of extreme poverty and inequity while strengthening the community's social fabric; developing city-wide resilience strategies; identifying and prioritizing intervention sites and action areas; employing monitoring and evaluation strategies for interventions; and garnering support and public and private investments.</p> <p>There are many different pathways where TIO has a direct or indirect link to food and nutrition security. Activities in TIO areas related to community kitchens, school attendance, infrastructural improvements, and social and economic development and investment. These can increase geographic and economic access to food as well as empower communities to be active citizens.</p>
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	<p>As of June 2018, the Secretary of Territorial Development and Citizen Participation reported there were 146 community kitchens in the Cali city region area. Cali has a network of community kitchens. Between 2016-2018 over 17,535 vulnerable people were served. Through the community kitchen network, the program known as “Alimentando Sonrisas” provided food and social assistance to vulnerable populations. The program was present in 47 community kitchens in TIO communes.</p> <p>School populations:</p> <p>The Secretary of Education has a database which shares enrollment numbers and information of schools that participate in school feeding programs. As of October 2018, there were 128,000 students enrolled in private school and 236,000 students enrolled in public schools. Data can be disaggregated by basic demographics including whether or not they are victims of the armed conflict. As of October 2018, there were 342 educational institutions recorded serving some type of supplemental meals to children ages 4-18, during the morning, afternoon, or both.</p>
<i>Recommended indicator</i>	<p>New indicator(s) needed as there are some existing indicators directly mapped to the PD.</p> <ul style="list-style-type: none"> • 41040010001: (Number) Students linked to the official education system at preschool, primary, secondary and middle levels • 41040010004: (Number) Students who benefited from school transport program • 43040020003: (Percent) Student who are victims of internal armed conflict with permanent access to enroll in public schools. • 44040020004: (Number) Methodologies developed to prioritize vulnerable population benefit from TIO investment programs • 41060020005: (Number) People from vulnerable populations attended in community kitchens per day.
<i>Source of data</i>	<ul style="list-style-type: none"> • National and local government statistics departments and social assistance/benefits departments • Food Security and Public Health Agencies or departments • NGO’s and community sector organizations • City partnerships addressing food insecurity/poverty; • Family and Children shelters; Homeless shelters • Doctor surgeries and clinics.
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Secretaría de Desarrollo Territorial y Participación Ciudadana • Secretaría de Educación
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • References and links to reports and tools.

Indicator 20: Percentage of children and youth (under 18 years) benefitting from school feeding programs

<i>What it measures</i>	The proportion or percentage of children and youth (everyone under 18 years old) attending school who benefit from a school feeding program. Variables measured include the total number of children and young people attending school in the city; the number and type of school feeding programs, and the demographic data of the beneficiaries. One may also consider what the pay scale is per institution.
<i>Application in context</i>	A 2017 report notes 161,926 nutritional supplements were delivered to 341 schools and 13,714 lunches were provided for single-day programs, across 68 public schools [43]. In 2018 the Ministry of Education graded the city’s school feeding program 100/100, a 35-point increase since in 2016. A 2018 report from the Ministry of Education reported there were 121,927 beneficiaries eligible to participate in the PAE across 339 of the 342 educational institutions across the area.
<i>Recommended indicator</i>	Indicators directly mapped to the PD. 41060020006: (Number) Students benefiting from the school feeding program.
<i>Source of data</i>	<ul style="list-style-type: none"> • National and local population statistics • Organizations and institutions that work with children • School feeding program providers • Schools and education authorities
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Secretaría de Educación
<i>Tools/Reports Included</i>	See worksheet for: <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • References and links to reports and tools.

Indicator 21: Number of formal jobs related to urban food system that pay at least the national minimum or living wage

<p><i>What it measures</i></p>	<p>The indicator measures the total number of formal paid jobs, that the food sector provides, which pay at or above the nationally accepted minimum or livable wage. The focus should be to quantify the total number of formal paid jobs in the food and drink sector. If there is no way to get specific figures for this indicator, it would still be worth knowing the total number of jobs in the urban food system, regardless of wage rates. If finding figures for the whole food system is too difficult, part of the food system could be considered (specific food business categories: production, processing and manufacturing; wholesale and distribution; retail, catering and hospitality; and waste management). This indicator doesn't include the informal food sector, but a similar process could be followed to develop a specific informal food sector indicator. Variables measured include total number of jobs in the food system and total number of jobs paid a minimum wage. This can be compared to the total number of jobs in the city or jobs in other sectors.</p>
<p><i>Application in context</i></p>	<p>According to the DANE June 2019 data, the unemployment rate in Colombia was 9.4%. During the April-June 2019 trimester, the rate was much higher among women compared to men 12.9% and 8.0% respectively. Women are more likely to work in informal settings (without contracts or social security benefits) compared to men (49.1% to 44.9% respectively). The DANE also reports the proportion of the population participating in the informal sector is 45.8% in Cali.</p> <p>A July 2019 CCC newsletter states unemployed in Cali: 12.6% between April-June of 2019, which was 1.1 percentage points higher compared to April-June of 2018.</p> <p>Variation (number) in population working in sectors (April-June 2019 vs 2018): Social services: 19,999 Construction: 13,261 Transport: 10,755 Other*: 6,071 Real estate: 5,050 Agriculture: -4,935 Commerce: -24,383 Manufacturing: -32,692</p> <p>A 2017 feasibility study on food supply and distribution centers in Cali city-region observed an average of 441 stalls among five markets (Yumbo, El Porvenir, Alameda, Alfonso López, and Santa Elena) which could employ up to 1,323 individuals if 100% of stalls were occupied.</p> <p>The 2017 DANE national agricultural census observed 7,000 small holder farmers in the city-region. That census also recorded, on average, 12,200 formal jobs related to the food production, distribution, and supply system generated within the city-region.</p>

	<p>In Santa Elena there were 400 merchant jobs directly linked to the market, with 1,200 jobs indirectly tied to the market. In CAVASA that number was 125 merchants with 1,580 indirect jobs.</p> <p>* Includes positions servicing public goods (water, electricity, gas); work in mines and quarries</p>
<i>Recommended indicator</i>	<p>New indicator(s) needed as there are no existing indicators directly mapped to the PD.</p> <ul style="list-style-type: none"> • 44020010010: (Number) Micro, small, and medium sized businesses (MIPyME) working in traditional, local, and regional gastronomy, who are trained and focused on generating employment and increasing national and international tourism.
<i>Source of data</i>	<ul style="list-style-type: none"> • National or local government employment registers and statistics or census data • Ministry/Department of Labor or Employment or Economic Development • Local Chamber of Commerce • Trade Unions representing food sector workers • Manufacturing Associations -Business or enterprise development agencies • Food sector support agencies
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Cámara de Comercio de Cali • Secretaría de Desarrollo Económico
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • References and links to reports and tools.

Indicator 22: Number of community-based food assets in the city

<i>What it measures</i>	<p>The number of community-based food assets in the city. These could be identified by category: community kitchens, community gardens, community shops, cafes, food hubs. Variables to measure include geographical location; categories and sub-categories of assets; assets that specifically target user groups (e.g. free or low-cost catering or retail).</p>
<i>Application in context</i>	<p>Some of the data required for this indicator may already have been collected for other indicators, e.g. school feeding; social assistance programs, food-related learning and skill development programs. To count community-based food assets, refer to indicator(s): 3, 4, 6, 14, 16, 19, 21.</p>

<i>Recommended indicator</i>	See above
<i>Source of data</i>	<ul style="list-style-type: none"> • Existing assets maps or directories • Local food sector reports • Public food register • NGOs, community sector, local food networks • Academics • Food policy council • Welfare and insecurity workers
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Secretaría de Desarrollo Territorial y Bienestar Social • Secretaría de Educación • Secretaría de Salud Pública • Cámara de Comercio
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • References and links to reports and tools.

Indicator 23: Presence of food-related policies and targets with a specific focus on socially vulnerably groups

<i>What it measures</i>	<p>Assesses the presence and the level of implementation of food-related municipal policies that either directly target vulnerable groups or do so indirectly by supporting and enabling the grass-root activities of community-based networks to increase social inclusion and provide food to marginalized individuals. If desired, critical assessment of the actual policy[44] may be implemented in addition. Variables measured include existing food-related policies or strategies, number and type of vulnerable group being targeted, the mechanism which links the policy to the socially vulnerable, and level of implementation including budget allocation, targets and monitoring of impact. The indicator will be assessed in a qualitative way.</p>
<i>Application in context</i>	<p>Some of the data required for this indicator may already have been collected for other indicators, e.g. school feeding programs, social assistance programs, food-related learning and skill development.</p> <ul style="list-style-type: none"> • PAE

	<ul style="list-style-type: none"> • ReSA <p>Consider national policies aimed at helping small and medium scale producers with technical assistance and best practice management at the farm gate and during food transformation. This is the objective of DAGMA-UMATA in Cali under <i>ley 607 del 2000</i>.</p> <p>There is policy aimed at improving the quality of life for women from minority groups in Cali by reducing economic, environmental, political and social barriers to a safe and prosperous way of life for women and their families. There are several strategies, but none are specifically related to food and nutritional security.</p> <p>Refer to indicator(s): 2, 3, 9, 14,15, 16, 19</p>
<i>Recommended indicator</i>	See above
<i>Source of data</i>	<ul style="list-style-type: none"> • Policies, strategies and planning documents from the municipality. • Specific reports on the work. • Key staff in the municipality. • Key civil society groups, networks and NGO's involved with food work that targets socially vulnerable groups.
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Secretaría de Salud Pública • Secretaría de Desarrollo Económico • Departamento Administrativo de Gestión del Medio Ambiente • Secretaría de Bienestar Social • Secretaría de Educación
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • Scoring sheet • References and links to reports and tools.

Indicator 24: Number of opportunities for food system-related learning and skill development in i) food and nutrition literacy, ii) employment training and iii) leadership

<i>What it measures</i>	Number of opportunities (courses, classes, etc.) for food-system-related learning and skill development in three different categories: i) food and nutrition literacy, ii) employment training and iii) leadership. This exercise will support gathering baseline data. Variables measured include total and number
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	of opportunities in the city to gain formal or informal training or skills development in each of three categories.
<i>Application in context</i>	<p>Some of the data required for this indicator may already have been collected for other indicators.</p> <ul style="list-style-type: none"> • School feeding programs and social assistance programs. (PAE, PROCEDA, PRAE) • TIO inputs in socio-economic development and service in community kitchens. • The SENA in Valle del Cauca offers educational opportunities along the whole food supply chain. <ul style="list-style-type: none"> ○ Agricultural production (horticulture, livestock, and fishing). ○ Technology, manufacturing, and technification in agroindustry ○ Biotechnology ○ Agronomy ○ Gastronomy ○ Hospitality <p>Review careers, classes, and workshops offered among the 12 area universities.</p> <ul style="list-style-type: none"> • Pontificia Universidad Javeriana • Universidad Del Valle • Universidad San Buenaventura • Universidad ICESI • Universidad Santiago De Cali • Universidad Autónoma De Occidente • Universidad Cooperativa De Colombia • Fundación Universitaria San Martín • Universidad Libre • Corporación Universitaria De Ciencia Y Desarrollo (Uniciencia) • Universidad Antonio Nariño • Unicatólica - Fundación Universitaria Católica Lumen Gentium <p>May include but not limited to: nutrition science, technology and food engineering, and agroindustrial processing.</p>
<i>Recommended indicator</i>	Refer to indicator 21
<i>Source of data</i>	<ul style="list-style-type: none"> • Adult education; community learning; further/higher education colleges; agricultural colleges; vocational colleges or learning centers; • Food centers; NGO's • Employment training programs; job centers; business incubators; business support agencies

	<ul style="list-style-type: none"> • Environmental/public health department • Schools, colleges and universities • City food partnerships and food governance bodies; local education authority
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Servicio Nacional de Aprendizaje (SENA) • ICBF • Secretaría de Educación • Secretaría de Salud Pública • University
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • References and links to reports and tools.

Food Production

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

<i>What it measures</i>	<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 are filtered by geospatial location, population density, income levels etc. 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 organizations. 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. The indicator may focus on specific urban agriculture gardens or for example on gardens for food production only. Variables measured include: Number (or percentage) 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 grower's household; and frequency of use. Possible additional data includes number (and type) of supporting policies; number of growers/garden; Costs/fees of garden use; urban agriculture or gardens surface area available per capita/household; and number of people on garden waiting lists.</p>
<i>Application in context</i>	<p>Some of the data required for this indicator may already have been collected for other indicators, specifically schools which have gardens.</p>

	A full inventory of school gardens and neighborhoods currently deemed “ECO-barrios” is required.
<i>Recommended indicator</i>	New indicator needed as there are no existing indicators mapped to the PD. <ul style="list-style-type: none"> 41060020004: Huertas caseras en comunas y corregimientos, con al menos el 20% de la meta, a través de cultivos hidropónicos, implementadas
<i>Source of data</i>	<ul style="list-style-type: none"> The city department/program for (urban) agriculture, land use planning, cadaster, parks and gardens department, social development, health NGOs, institutions
<i>Organization responsible</i>	<ul style="list-style-type: none"> DAGMA Secretaría de Educación CVC
<i>Tools/Reports Included</i>	See worksheet for: <ul style="list-style-type: none"> Information on data collection, disaggregation, and analysis. Refer to work done in Quito’s AGRUPAR program.

Indicator 26: Presence of municipal policies and regulations that allow and promote agriculture production and processing in the municipal area

<i>What it measures</i>	Assesses the presence of supportive municipal policies and regulation that allow and promote urban and peri-urban agriculture production and processing. It will help define gaps or areas for improvement by revising/formulating new policies and regulations. Note: the mere presence of policies in itself will not enhance urban and peri-urban agriculture production and processing if such policies are not implemented or enforced. Variables measured include number and type of policies and regulations, level of implementation and enforcement, and information and communication.
<i>Application in context</i>	Some of the data required for this indicator may already have been collected for other indicators, e.g. school feeding; social assistance programs, food-related learning and skills development.
<i>Recommended indicator</i>	New indicator needed as there are no existing indicators mapped to the PD.

<i>Source of data</i>	<ul style="list-style-type: none"> • Self-assessment among representatives participating in the coordination body (can be validated by external actors). • Policy review, analysis, and previous research (relevant government departments including agriculture, land use and planning, legal office, food safety, health, economic development)
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Departamento Administrativo de Planeación Municipal • CEDECUR • DAGMA • Secretaría de Desarrollo Económico
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • Scoring sheet • References and links to reports and tools.

Indicator 27: Surface area of (potential) agricultural spaces within the municipal boundary

<i>What it measures</i>	<p>The indicator monitors the surface area of land within municipal boundaries that is (or may be) used for agriculture, zoned for agriculture, and land that is open and vacant that could potentially be used for agriculture. It seeks to spatially locate these areas to plan, preserve and protect agricultural lands from (unplanned) urban growth, while securing user rights for farmers. It can also aid in maintaining local production, urban water quality and supply, and flood retention (or other reduced climate risks). Variables measured include surface areas (m²), spatial location, land ownership, accessibility, use, suitability, and feasibility.</p>
<i>Application in context</i>	<p>Based on 2014 data from the Agricultural Census 1,100,046 hectares are allotted for agricultural use in Valle del Cauca. Around 75% of resident producers own land. Renters account for 8.7% while 7.8% of land is considered collective property. 0.8% rely on a share cropping system.</p> <p>Based on information from UMATA and the <i>Plan de Ordenamiento Territorial 2014</i>, Cali's total area is 55,884 hectares. The urban area accounts for 11,915 hectares (21%), while the rural area accounts for 43,969 hectares (79%).</p> <p>In the rural area, only 7,402 hectares (16.8%) of land is fit for sustainable production.</p>
<i>Recommended indicator</i>	<p>New indicator needed as there are no existing indicators mapped to the PD.</p>

<i>Source of data</i>	<ul style="list-style-type: none"> The city department/program for (urban) agriculture, land use planning, cadaster, parks and gardens department. Cadastral maps, satellite and aerial images.
<i>Organization responsible</i>	<ul style="list-style-type: none"> Departamento Administrativo de Planeación Municipal DAGMA-UMATA
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> Information on data collection, disaggregation, and analysis. References and links to reports and tools.

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

<i>What it measures</i>	<p>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. Variables measured include 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.</p> <p>It is measured in percentage of people (disaggregated by women and type of tenure)</p>
<i>Application in context</i>	<p>Some of the data required for this indicator may already have been collected in the indicator above (27).</p> <p>According to the 2014 Agricultural Census in Valle del Cauca there were 30,606 producers, 19,526 were men, while 11,080 were women. The majority of producers for both sexes were between 50-54 years old.</p>
<i>Recommended indicator</i>	<p>New indicator needed as there are no existing indicators mapped to the PD.</p> <ul style="list-style-type: none"> 41020030005 (Number): Indigenous women with whom cultural and gender self-recognition is promoted 45030010009: Public policy for women and gender equity assessed and adjusted
<i>Source of data</i>	<ul style="list-style-type: none"> Administrative records (cadaster or land registry) Household and agricultural surveys
<i>Organization responsible</i>	<ul style="list-style-type: none"> DAGMA – UMATA TIOS Subsecretaría de Equidad de Género
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> Information on data collection, disaggregation, and analysis.

Indicator 29: Proportion of agricultural land in the municipal area under sustainable agriculture

<i>What it measures</i>	Total agricultural area in the municipality (also referred to as urban and peri-urban agriculture) under sustainable agriculture as per the total area of agricultural land in the municipal area. Depending on specific city interests and political priorities, a city may be interested in specifically monitoring the proportion of agricultural land being farmed as agro-ecological or organic agriculture (or conservation agriculture, climate smart agriculture, nature-based farming, multifunctional farming or any other locally relevant denomination of “sustainable agriculture”). Variables measured include total surface area of agricultural land within the municipal area/boundaries; total surface area of agricultural land under sustainable agriculture. If data are available: Geo-spatialization and location of agricultural areas under sustainable agriculture.
<i>Application in context</i>	Based on information from UMATA and the <i>Plan de Ordenamiento Territorial 2014</i> , Cali’s total area is 55,884 hectares. The urban area accounts for 11, 915 hectares (21%), while the rural area accounts for 43,969 hectares (79%). In the rural area, only 7,402 hectares (16.8%) of land is fit for sustainable production.
<i>Recommended indicator</i>	New indicator needed as there are no existing indicators mapped to the PD. <ul style="list-style-type: none"> • 42040010003: Hectares in rural areas in the process of agricultural and technological conversion to agroforestry and silvopastoral systems. • 42040010002: Squared meters of living barriers with vetiver grass in strategic areas of the Cali River Basin that contribute to soil retention, water and food production.
<i>Source of data</i>	<ul style="list-style-type: none"> • Agricultural land (management) records held by the municipal or national department for agriculture • Agricultural or farm surveys or household surveys with an agricultural component • Land use and GIS maps
<i>Organization responsible</i>	<ul style="list-style-type: none"> • DAGMA -UMATA • Infraestructura de Datos Espaciales (IDESC)
<i>Tools/Reports Included</i>	See worksheet for: <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis.

Indicator 30: Number of urban and peri-urban food producers that benefited from technical training and assistance in the past 12 months

<i>What it measures</i>	Monitors the number of food producers (horticultural growers, smallholders and farmers) in and close to the city that have received technical training and assistance over a given time period (e.g. last twelve months). Variables measured include: total annual number of urban and peri-urban food producers (horticultural growers, smallholders and farmers); total number of food producers that benefited from technical training and assistance; type of beneficiaries; type of training and technical assistance provided; type of training providers (e.g. municipality? NGOs, universities, etc.)
<i>Application in context</i>	Between 2016-2018 1,550 small and medium producers from peri-urban and rural areas received technical assistance and training on sustainable and best practices. Data on urban producers is unavailable.
<i>Recommended indicator</i>	New indicator needed as there are no existing indicators mapped to the PD. 42040010006: (Number) of small and medium-sized rural producers receiving technical training and assistance (ATDR) on sustainable agricultural systems and best agricultural and manufacturing practices.
<i>Source of data</i>	<ul style="list-style-type: none"> Records from national government, local government, non-governmental organizations, private sector training and technical assistance programs
<i>Organization responsible</i>	<ul style="list-style-type: none"> DAGMA CEDECUR (potentially for urban producers)
<i>Tools/Reports Included</i>	See worksheet for: <ul style="list-style-type: none"> Information on data collection, disaggregation, and analysis.

Indicator 31: Number of municipal food processing and distribution infrastructures available to food producers in the municipal area

<i>What it measures</i>	Monitors the number (and type of) municipal infrastructure for storage, processing and distribution of food located in the municipal area, including storage buildings, processing plants, transport facilities, and wholesale and consumer markets. The indicator focuses on municipal infrastructure. It is acknowledged that other private or civil society funded, and managed infrastructures may also exist for municipal food producers. If information is available, monitor them. Variables measured include availability of local food processing and distribution infrastructure, data on types of infrastructure (i.e. location), and data on users.
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<p><i>Application in context</i></p>	<p>2017 data observed CAVASA and Plaza de Mercado Santa Elena as two of the largest distribution, wholesale, and retail markets in the city-region. The main retail markets/plazas in Cali are Alameda, Provenir, Floresta, Siloé, and Alfonso López, all of which are distributed across the city. Each market charges for space, utilities, waste disposal, and general management.</p> <p>WHOLESALE/RETAIL MARKET DESCRIPTION</p> <p>Corporación de Abastecimiento del Valle del Cauca S.A (CAVASA)</p> <ul style="list-style-type: none"> • Established in 1972 • Governed by stakeholders (private-public partnership) • Located outside of Cali, in the town of Candelaria. • Built area 40,000 m² • 560 renters/retailers operate within 9 bodegas. • Does not offer cold chain services. (Private entities who use bodegas are excluded). <ul style="list-style-type: none"> ○ Main product: Potato • Manages composting on premise • Main users are wholesalers and retailers from Cali and neighboring towns; families from Candelaria. • Adequate parking capabilities <p>Plaza de Mercado Santa Elena</p> <ul style="list-style-type: none"> • Established in 1962 • Governed by association of merchants • Located in Cali (commune 10). • Built area 12,000 m² • There are 400 renters/retailers operate inside the market and in 189 bodegas around the perimeter. • Has cold chain capabilities <ul style="list-style-type: none"> ○ Main product(s): Fruits
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	<ul style="list-style-type: none"> ○ Does not have an efficient organic waste management plan. • Main users are wholesalers and retailers from Cali and neighboring towns; families, <i>Fruver</i>, hotels and restaurants, street food peddlers, corner stores. • Deficient parking capabilities. <p>Study: “Estudio de factibilidad para implementar una Central de Abastecimiento de Productos Agropecuarios y Agroindustriales en Santiago de Cali con enfoque de Ciudad Región”</p> <p>TRANSPORT (Cali only)</p> <p>Under Article 282 of <i>Acuerdo 0373</i> from the 2014 POT, areas that have high concentration of medium and high impact industries must be supported by public infrastructure including. This includes the six markets mentioned above</p> <ul style="list-style-type: none"> • Parking spaces (one space per every 20 m² built) • Loading zone(s) (one 3x10 meter space per every 500 m² built) • Motorcycle and bicycle parking (one spot for every 40 and 50 m² built, respectively) <p>STORAGE AND SUPPLY (Cali only)</p> <p>Under Article 232 the city must provide basic equipment for management, storage, and distribution of food stuffs including: slaughterhouses, cold chain/refrigeration, and storage and supply space.</p>
<i>Recommended indicator</i>	<p>More indicator needed as there are few existing indicators directly mapped to the PD.</p> <p>41060020007: (Number) of adequate food supply and management centers.</p>
<i>Source of data</i>	<ul style="list-style-type: none"> • Economic/market government department • Food business registers-Agriculture department/programs • Earlier research
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Departamento Administrativo de Planeación Municipal • Secretaría de Desarrollo Económico • DAGMA • CAVASA • Cámara de Comercio
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis.

Indicator 32: Proportion of local/regional food producers that sell their products to public markets in the city

<i>What it measures</i>	Monitors the share of local/regional food producers that sell (part of) their products to one or more public market outlets in the city. The focus is first on public markets for ease of data collection. If information is available, private-market outlets could be included. If data are available, an additional and complementary indicator could measure the Percentage/proportion of local/regional food that is sold to public markets in the city”. Variables measured include total number of local/regional food producers, total number of food producers that sell their products in public markets in the city, type of food producers, type and location of market outlets. Data can be disaggregated by producer demographics and market outlet (supermarket, municipal market, grocery etc.) Data may be collected through market and food producer surveys.
<i>Application in context</i>	<p>According to the 2014 Agricultural Census in Valle del Cauca there were 30,606 producers, 19,526 were men, while 11,080 were women. Most producers for both sexes were between the ages of 50-54.</p> <p>Based on 2014 DANE data from the feasibility study, there were 5,173 producers in the Cali city-region.</p> <p>Cali: 1,317 Candelaria: 532 Jamundí: 2,127 Palmira: 770 Yumbo: 427 TOTAL 5,173</p> <p>One defining characteristic is the existence of intermediaries. There are few producers that sell directly to consumers or even directly to distribution centers. However, based on 2017 data from the EMRU, in the Barrio Calvario, there were 159 producers coming from Cali’s rural <i>corregimientos</i>. These producers tend to sell fruits vegetables, herbs, flowers, and coffee.</p>
<i>Recommended indicator</i>	New indicator needed as there are no existing indicators directly mapped to the PD.
<i>Source of data</i>	<ul style="list-style-type: none"> • Economic/market government department • Agriculture department/programs • Different market stores/locations-Earlier research
<i>Organization responsible</i>	<ul style="list-style-type: none"> • DANE- CNA • Cámara de Comercio • Secretaría de Desarrollo Económico

<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • Sample market survey • References and links to reports and tools.
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Indicator 33: Annual proportion of urban organic waste collected that is re-used in agricultural production taking place within municipal boundaries

<i>What it measures</i>	Measures the percentage of urban organic waste collected and recycled that is re-used in urban and peri-urban agriculture production. Variables measured include total tonnage of urban organic waste collected in the city, total tonnage of urban organic waste that is recycled; total tonnage of recycled organic waste that is used in urban and peri-urban agriculture production (e.g. agriculture taking place within municipal boundaries)
<i>Application in context</i>	<p>Based on 2014 data from EMSIRVA, 12,677 tons of organic waste were collected in the city (including waste from public markets).</p> <p>CAVASA composting program: Recovered 3.3 tons of waste per day (2016).</p> <p>Data source: “informe de seguimiento y evaluación al plan de gestión integral de residuos sólidos de santiago de cali pgirs 2015-2027”</p>
<i>Recommended indicator</i>	New indicator needed as there are no existing indicators directly mapped to the PD.
<i>Source of data</i>	<ul style="list-style-type: none"> • Municipal bodies and/or private contractors. • NGOs and community organizations. • municipal records, service providers, community profiles and household surveys. • UN-Habitat is collecting information on solid waste management and discharge in more than 1000 cities that are part of the City Prosperity Initiative.
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Secretaría de Vivienda Social y Hábitat - Unidad Administrativa Especial de Servicios Públicos • CAVASA • CEDECUR • DAGMA
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • References and links to reports and tools.

Food Supply and Distribution

Indicator 34: Existence of policies/programs that address the reduction of GHG emissions in different parts of the food supply chain

<p><i>What it measures</i></p>	<p>Assesses the existence of policies/programs that address the reduction of GHG emissions in different parts of the food supply chain (e.g. processing, storage, transport, packaging, retail, cooking, waste disposal etc.) Variables measured include policy initiatives, research initiatives, practical initiatives (e.g. technical innovation; public engagement & behavior change). It can also GHG reduction targets.</p>
<p><i>Application in context</i></p>	<p>In Colombia</p> <p>The United Nations Framework Convention on Climate Change (UNFCCC) was adopted in New York on 9 May 1992 and ratified by Colombia through Law 164 of 1994.</p> <p>The Kyoto Protocol (1997) was ratified by Colombia three years later through Law 629 of 2000 and regulated by Decree 1546 of 2005.</p> <p>The National Development Plan (NDP) 2010-2014 established four mechanisms to improve environmental sustainability efforts: the National Climate Change Adaptation Plan (PNACC), the Colombian Low Carbon Development Strategy (ECDBC), the National Emissions Reduction Strategy for Deforestation and Forest Degradation (ENREDD+) and the Financial Strategy to reduce the state's fiscal vulnerability to the occurrence of a natural disasters.</p> <p>A document in the CONPES 3700 of 2011, entitled “Estrategia institucional para la articulación de políticas y acciones en materia de cambio climático en Colombia” calls for the strengthening of governance and preparedness considering the impacts of climate change through the four mechanisms established within the 2010-2014 NDP.</p> <p>Congress approved the project of law 301 of 2018 and in July 2019, President Duque authorized the development of policies and regulations aimed at combatting food loss and waste. A policy is expected to be developed within the year and is expected to be enforced starting August 2020.</p> <p>In Cali</p> <p>The comprehensive plan for adaptation and mitigation to climate change for Cali proposes mitigation actions in the agricultural, transport, industrial and waste sectors. Action plans for GHG reduction are proposed in each sector [45]. The CVC, DAGMA, and CIAT celebrated to creation of agreement No. 110 of 2015. Its objective was to join technical efforts and economic and human resources for developing actions within the framework of adaptation and mitigation to Climate Change in the city Cali.</p> <p>Agreement 0373 of 2014, proposes and encourages the use of vehicles (includes private and public transportation) that operate on clean energy to reduce CO2 emissions.</p> <p>Similarly, the Municipal Low Carbon Development Strategy for Cali aims to reduce GHG emissions and ensure resilient and climate-compatible progress, while helping to achieve the development and country priorities, through the structuring of the priority Sectoral Action Plans (SPs) for the municipality [46].</p> <ul style="list-style-type: none"> • 1 tons of Food waste in landfills generate 25 tons of CO2 <p>In Cali, 8,254,225 tons of CO2 will be emitted due to food waste.</p>

	<ul style="list-style-type: none"> • Targets <p>Colombia: in 2015 set a national target of reducing its GHG emissions by 20% by 2030.</p> <p>Cali: Target for potential reductions of CO2 emissions by 2040 based on different action plans:</p> <ul style="list-style-type: none"> • Health, housing and infrastructure: Promoting ECO-barrios <ul style="list-style-type: none"> ○ 181,592 tCO2e • Transportation: (eco-efficient streetlights, promoting bicycle use and electric cars, decommission energy/fuel inefficient public transportation vehicles) <ul style="list-style-type: none"> ○ 10,708,008 tCO2e • Manufacturing: using recycled materials in manufacturing. <ul style="list-style-type: none"> ○ 78,947 tCO2e • Waste management: strengthen PGIRS via governance and educations, waste-water management <ul style="list-style-type: none"> ○ 554,909 tCO2e <p>Source: Plan integral de Cambio climático</p>
<i>Recommended indicator</i>	<p>In PD</p> <ul style="list-style-type: none"> • 42040020007: (Percent) of Climate Change Adaptation and Mitigation Plan, designed, adopted and implemented.
	<p>1. 42040020004: (Percent) of Environmental management in the business sector promoting and implementing practices aimed at reducing the carbon footprint, green markets and cleaner production.</p> <p>In adaptation and mitigation plan look at indicators that focus on:</p> <ul style="list-style-type: none"> • Transportation: Promoting the use of bicycles, training drivers on vehicle efficiency; promote use of electric vehicles, promote use of public transportation • Waste and water management • GHG Inventory: collect baseline data to establish benchmarks
<i>Source of data</i>	<ul style="list-style-type: none"> • Climate change or sustainability/resilience, or environmental departments; • Policy and planning department; • Universities and colleges; • Food governance structures; • Local food & climate change networks; • Environmental NGO's and campaigners; • Businesses

<i>Organization responsible</i>	<ul style="list-style-type: none"> • CVC • DAGMA • CIAT • Oficina de Resiliencia de Cali
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • References and links to reports and tools.

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

<i>What it measures</i>	<p>Assesses the presence, functioning and effectiveness of a development plan to strengthen resilience and efficiency of local food supply chain logistics. Variables measured include: number (by type) of relevant development plans; stakeholders involved in developing and implementing plans; food businesses involved; meetings held in relation to developing plans; municipal departments and staff involved; number of initiatives or actions taken by multi-stakeholder body to implement plan; and amount (and sources) of budget.</p>
<i>Application in context</i>	<p>Some of the data required for this indicator may already have been collected for other indicators.</p>
<i>Recommended indicator</i>	<p>Refer to indicator 6 and 34.</p>
<i>Source of data</i>	<ul style="list-style-type: none"> • Municipal funding proposals and reports • Municipal Agriculture, Food Supply Chain and Markets departments • Development agencies and support organizations • NGO's • Food system labor organizations • 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 initiative
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Oficina de Resiliencia de Cali • DAGMA
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis • References and links to reports and tools

Indicator 36: Number of fresh fruit and vegetable outlets per 1000 inhabitants (markets and shops) supported by the municipality

<i>What it measures</i>	Number of food markets or retail outlets providing fresh fruit and vegetables per 1,000 inhabitants that are directly supported by the community. Variables measured include categories by type of shop (and scale); number of shops and markets per neighborhood that sell fresh fruit and vegetables; total populations figures by neighborhood.
<i>Application in context</i>	<p>According to the 2014 Agricultural Census in Valle del Cauca there were 30,606 producers, 19,526 were men, while 11,080 were women. Most producers for both sexes were between the ages of 50-54.</p> <p>Based on 2014 DANE data from the feasibility study, there were 5,173 producers in the Cali city-region.</p> <p>Cali: 1,317 Candelaria: 532 Jamundí: 2,127 Palmira: 770 Yumbo: 427 TOTAL 5,173</p>
	One defining characteristics is the existence of intermediaries. There are few producers that sell directly to consumers or even directly to distribution centers. However, based on 2017 data from the EMRU, in the Barrio Calvario, there were 159 producers coming from Cali's rural <i>corregimientos</i> . These producers tend to sell fruits vegetables, herbs, flowers, and coffee.
<i>Recommended indicator</i>	<p>More indicators needed as there are too few existing indicators mapped to the PD.</p> <ul style="list-style-type: none"> • 41060020003: (Number) of farmers markets and producer meetings.
<i>Source of data</i>	<ul style="list-style-type: none"> • Public food register or similar list held by food safety inspection team or Environmental Health Department (national or local government); • Economic Development Department; • City Markets Department; • Trader organizations or unions; Business Development partnerships; • Wholesale and retail consortia or representative bodies; • Greengrocer networks; • Local food activists; • Food governance body e.g. Food Policy Council, Public Health Department, • NGO's concerned with food access
<i>Organization responsible</i>	<ul style="list-style-type: none"> • DANE • Cámara de Comercio • CAVASA • Secretaría de Desarrollo Económico • Departamento Administrativo de Planeación Municipal
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • References and links to reports and tools.

Indicator 37: Annual municipal investment in food markets or retail outlets providing fresh food to city residents, as a proportion of total (investment) budget

<i>What it measures</i>	Annual municipal investment in food markets or retail outlets providing fresh foods to city residents, as a proportion of the total investment budget. Variables measured include total investment budget and total annual investment in food markets or retail outlets providing fresh foods to city residents (by type of market, and type of investment; and total population figures by neighborhood.)
<i>Application in context</i>	<p>Only until March 2017, the State Council ordered that the Municipality of Cali must take over the marketplaces, which were owned by the liquidation company Cali Public Service Company, Emsirva E.S.P.</p> <p>The Council's judgment cites that, in the case of goods for public use, marketplaces should not be freely available. To date, the Mayor of Cali has not yet defined what corresponds to each unit, but so far, the procedures are being advanced so that the mayor's office assumes responsibilities for the management market locations.</p>
<i>Recommended indicator</i>	New indicator needed as there are no existing indicators mapped to the PD.
<i>Source of data</i>	<ul style="list-style-type: none"> • Municipal budgeting and finance or account department • Retail and wholesale market managers/coordinators • City regeneration agencies or departments • Neighborhood investment or regenerations partnerships
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Cámara de Comercio • Secretaría de Desarrollo Económico • Departamento Administrativo de Planeación Municipal
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • References and links to reports and tools.

Indicator 38: Proportion of food procurement expenditure by public institutions on food from sustainable, ethical sources and shorter (local/regional) supply chains

<i>What it measures</i>	<p>Proportion (or percentage) of food procurement expenditure by public institutions on food from sustainable, ethical sources and local or regional supply chains. It also measures the presence of a set of criteria to drive an increase in the proportion of food procurement expenditure by public institutions on food from sustainable, ethical sources and local or regional supply chains. Variables measured include public institution food procurement contracts (seeking specific words such as 'sustainable', 'ethical', 'short supply-chain', 'local', 'regional', 'agroecological'...etc.) It may be more practical to start with one or two categories such as schools or hospitals.</p> <p>If this indicator is too ambitious, an alternative could be the presence of a set of criteria to drive an increase in the proportion of food procurement expenditure</p>
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	by public institutions on food from sustainable, ethical sources and shorter (local/regional) supply chains.
<i>Application in context</i>	EMSIRVA SA.
<i>Recommended indicator</i>	New indicator needed as there are no existing indicators mapped to the PD.
<i>Source of data</i>	Procurement officers in local government of public institutions such as: Hospitals, schools, colleges and universities, prisons, elder care homes etc.
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Departamento Administrativo de Contratación Pública • Departamento Administrativo de Planeación Municipal • DAGMA
<i>Tools/Reports Included</i>	See worksheet for: <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • References and links to reports and tools.

Indicator 39: Presence of food safety legislation and implementation and enforcement procedures

<i>What it measures</i>	Assesses the presence, implementation, and enforcement procedures for food safety legislation. The indicator will be assessed in a qualitative way. Metrics that could be used to indicate how food safety is improving (or not) include: frequency within which the business comes up for inspection; reduction (or increase) of non-compliance reports; reduction (or increase) of reported food poisoning incidents; level of public confidence in food safety measures.
<i>Application in context</i>	<p>The <i>Instituto Nacional de Vigilancia de Medicamentos y Alimentos</i> (Invima) is a national regulatory agency and a scientific technical monitoring and control body. Its mission is to protect the collective and individual health of Colombians, by enforcing health standards associated with consumption and use of food, medicine, medical devices and other products subject to health surveillance.</p> <p>Law 100 of 1993 created the "General System of Social Security in Health" in which article 245 ordered the creation of the Invima. Under this mandate, Decree 1290 of 1994 was issued, which specified the functions of the Invima and established its basic organization.</p>

	<ol style="list-style-type: none"> 1. Contribute to the continuous improvement of the country's health status by strengthening risk-focused health inspection, surveillance and control by ensuring the protection of Colombians' health and national and international recognition. 2. Providing services with quality standards to strengthen the public's confidence 3. Strengthen the management of the knowledge, skills and competencies of the public servants of the institution. 4. Contribute to a legal and transparent Colombia by implementing actions that mitigate the effects of illegality and corruption. <p>https://www.minsalud.gov.co/Normatividad_Nuevo/DECRETO%203075%20DE%201997.pdf</p> <p>In 2018, Invima monitored 7,284 food related businesses. There were 38,578 valid registered permits and safety notifications for food products. There were 553 plants that managed animal Sanctions for food and beverages in 2018 totaled \$8,425,694,970 (COP). For meat derived products, those sanctions were \$927,073,840 (COP). In 2018 Invima recorded 15,442 inspections, though data is not disaggregated by industry. https://app.invima.gov.co/cifras/#Ivc</p> <p>Find information of food safety legislation for animal protein food products. Find information on food safety legislation for aquaculture. Find information on food safety legislation for other food products. Find information on food safety legislation for alcoholic beverages.</p> <p>In Cali the Secretary of Public Health and Secretary of Safety and Justice give the sub secretary of Inspección, vigilancia y control (IVC) the authority to monitor, survey and enforcing health and safety standards.</p>
<i>Recommended indicator</i>	<p>More indicators needed as there are few existing indicators mapped to the PD.</p> <p>41030010003: (Percent) of efficacy of public health surveillance and monitoring systems.</p>
<i>Source of data</i>	<ul style="list-style-type: none"> • Environmental health department • Food inspection team or agency • Ministry of Department of Agriculture • Department of Public Health • Audit reports on local government food safety procedures

<i>Organization responsible</i>	<ul style="list-style-type: none"> • Instituto Nacional de Vigilancia de medicamentos y Alimentos (INVIMA) • Secretaría de Salud Pública
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • References and links to reports and tools.

Indicator 40: Existence of support services for the informal food sector providing business planning, finance and development advice

<i>What it measures</i>	<p>Assesses the existence of support services for the informal food sector providing business planning, finance and development advice. The main focus is on sanitation and food safety regulations, but also looks at wider support needs and provision (in terms of infrastructure, skills etc. Variables measured include number (and type) of informal food businesses (by category); businesses most in need of support services; support services available to informal businesses; and types of support needs that should be addressed as a priority.</p>
<i>Application in context</i>	<p>Colombia</p> <p>The latest data on informal workers in Colombia (April-June 2019) observed 46.8% of the people in the job market among the 13 cities and metropolitan areas (based on 2005 census data) were informal workers. Among 23 city and metro areas that rate was 47.9%. Among this group, 49.1% of informal workers were female, while 44.95 were male.</p> <p>Among 13 major metropolitan areas, there were 5,039 informal jobs. In terms of positions in the food sector</p> <ul style="list-style-type: none"> • 35 jobs were in agriculture, fishing, ranching, hunting, and silviculture. • 2,117 were in hotels and restaurant commerce • 558 were in transport, storage, and communication • 857 were in communal, social, and personal services. <p>Find DANE data on the informal job market.</p> <p>Medellín</p> <p>The city has a robust study on jobs in the informal food sector. It provides proper background on the informal food service job market in Colombia and provides a methodology to collect information and recommendations to</p>

	<p>improve condition for informal workers by strengthening their associative power and providing mechanisms to formally, efficiently, and equitably integrate them into the food industry.</p> <p>http://www.fao.org/3/a-as340s.pdf</p> <p>Cali</p> <p>The city understands the informal job market represents an alternative source of income for people who struggle to find employment in the formal job market. A major focus for the city is to provide these workers protection in terms of health and safety. Informal workers are unable to register for health insurance or social security; thus the city has established a program which aims to improve working conditions for these individuals through the development of Grupos Organizados de Trabajadores Informales (GOTIS) and development and implementation of health and safety programs.</p> <p>In Cali the proportion of informal workers between April-June 2019 was 45.8%. Data collected observed 570 of 1,244 jobs were informal.</p>
<i>Recommended indicator</i>	<ul style="list-style-type: none"> • 42030020011: (Number) of informal workers in modular systems • 42060020008: (Number) of policies and plans that are updated and adopted regarding the inclusion of informal recyclers in the city's formal waste management industry (refer to Municipal Decree No. 411.0.20.0133 of March 19, 2010) • 44010010003: (Number) of entrepreneurs (includes women, young people and informal workers) who obtain comprehensive financial, administrative, technical and commercial assistance • 44010010007: (Number) of organized informal workers' groups (GOTIS) that have implemented occupational health and safety programs
<i>Source of data</i>	<ul style="list-style-type: none"> • Existing reports or registers of informal food businesses • NGOs, agencies, and municipal departments that work with food businesses • Street trader organizations or unions; community organizations; police' food safety inspectors.
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Secretaría de Salud Pública • Secretaría de Desarrollo Económico • Secretaría de Seguridad y Justicia
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • References and links to reports and tools.

Food Waste

Indicator 41: Total annual volume of food losses & waste

<i>What it measures</i>	Total annual volume of food losses and waste measured in tons or kilograms. Variables to be measured include: Food waste generated as system stages (Production, Handling and storage, Processing and packaging, Distribution and point of purchase, Household/ consumption); Types of food wasted (Edible vs inedible food); Destinations of food waste (landfill, composting, redistribution, etc.)
<i>Application in context</i>	<p>Colombia</p> <p>Nearly 10,000,000 (9.7 M) tons of food waste is generated per day. New law aimed at creating public policy.</p> <p>Cali</p> <p>In the city there are 300 informal dumpsites.</p> <p>40% of food aimed at human and animal consumption wasted per day in Cali</p> <p>1,800 tons of solid waste generated per day. Of those, 1,260 tones are from processed and unprocessed foods.</p> <p>Oscar Vega from one food bank collects between 10-12 tons of fresh and processed foods per day.</p> <p>24,450 tons of foods safe for human consumption are rescued per year</p> <p>DAGMA 2018 data shows households in Cali generated 319,305 tons of food waste, that number is expected to rise to 330,169 tons in 2019.</p> <p>Estimate posit once national policy is enforced; 504 tons of food waste will be diverted per day in Cali.</p> <p>https://www.elpais.com.co/cali/504-toneladas-de-alimentos-dejarian-de-desperdiciarse-a-diario-en-con-nueva-ley.html</p>
<i>Recommended indicator</i>	<p>New indicator needed as there are no/irrelevant existing indicators mapped to the PD.</p> <ul style="list-style-type: none"> • 42060020001: (Number) of sites inspected by IVC impacted by inadequate disposal of solid waste in public spaces
<i>Source of data</i>	<ul style="list-style-type: none"> • Municipal waste management department • Private haulage companies • Supply and distribution companies
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Secretaría de Vivienda Social y Hábitat - Unidad Administrativa Especial de Servicios Públicos • CAVASA • DAGMA
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection and analysis. • References and links to reports and tools.

Indicator 42: Annual number of events and campaigns aimed at decreasing food loss and waste

<i>What it measures</i>	Annual number of events and campaigns aimed at decreasing food loss and waste. Variables measured include annual number of events and campaigns, types of activities (events, campaigns, research studies), targeted sectors (households, business, foodservice, manufacturing, production etc.) If applicable: the impact on food waste reduction in kg.
<i>Application in context</i>	<p><u>"Basura Cero"</u> (Zero waste) campaign includes:</p> <ul style="list-style-type: none"> • 'Tu Basura sigue siendo tu basura' (Your trash is still your trash): Aimed showing and educating people what happens to their trash once they take it out of their homes. • Forums with community organizations. • 80 workshops with environmental experts and recyclers among residential and commercial spaces in commune 17. Teaching how to properly sort and dispose of products.
<i>Recommended indicator</i>	New indicator needed as there are no existing indicators mapped to the PD.
<i>Source of data</i>	<ul style="list-style-type: none"> • Civil society annual reports • Annual reports of organizations that implement recovery and redistribution of safe and nutrition food for direct human consumption • Lifelong learning / education institutions • Records from solid waste or environmental departments or external stakeholders supporting events and campaigns.
<i>Organization responsible</i>	<ul style="list-style-type: none"> • DAGMA • CVC • Pontificia Universidad Javeriana
<i>Tools/Reports Included</i>	See worksheet for: <ul style="list-style-type: none"> • Data collection and analysis • Scoring sheet • References and links to reports and tools.

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

<i>What it measures</i>	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. Variables measured include number (and type) of policies and regulations, level of implementation, enforcement, information and communication tools available, number and type of target groups, monitoring, evaluation and update mechanisms, reporting towards SDG 12.3 mechanisms
<i>Application in context</i>	Colombia Congress approved the project of law 301 of 2018 and in July 2019, President Duque authorized the development of policies and regulations aimed at combatting food loss and waste. A policy is expected to be developed within the year and is expected to be enforced starting August 2020. Cali The development plan does not map any of its indicators to SGD 12 (Responsible consumption and production) Decreto Municipal 1147 de 2015 called for the PGIRS 2015-2027
<i>Recommended indicator</i>	New indicator needed as there are no existing indicators mapped to the PD.
<i>Source of data</i>	<ul style="list-style-type: none"> • Social protection and welfare local authorities/national reports • Annual reports of organizations that implement recovery and redistribution of safe and nutritious food for direct human consumption • Local solid waste management departments and private haulage companies
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Ministry of Health • Departamento Administrativo de Planeación Municipal
<i>Tools/Reports Included</i>	See worksheet for: <ul style="list-style-type: none"> • Data collection and analysis • Scoring sheet • References and links to reports and tools.

Indicator 44: Total annual volume of surplus food recovered and redistributed for direct human consumption

<i>What it measures</i>	<p>The indicator measures the totality of available food recovered and redistributed for direct human consumption along the entire urban food supply chain, occurring from the time at which availability is recorded (in urban and peri-urban areas) until it reaches and is used by the final urban consumer as food.</p> <p>Variables measured include safe and nutritious food recovered and redistributed for direct human consumption at various system stages (production, handling and storage, processing and packaging, catering, distribution and point of purchase, household consumption). If desired measure commodity or types of food recovered/redistributed for human consumption and Kcal or nutritional content of different types of food waste.</p>
<i>Application in context</i>	<p>Recovery and redistribution of safe and nutritious food for human consumption has been highlighted as an important strategy for the prevention of food waste and for contributing to urban food security. According to a MANA-FAO 2015 study, 21% of the fruits and vegetables produced (1.4 million tons) in Colombia are lost every year. The given volumes of food losses could, however, feed 9.5 million people for one year.</p> <p>Through the Food Bank, in 2017 7'622,000 food rations were recovered and redistributed, benefiting 33,377 children, 12,475 young people, 4,438 adults, 9,635 older adults [47].</p>
<i>Recommended indicator</i>	New indicator needed as there are no existing indicators mapped to the PD.
<i>Source of data</i>	<ul style="list-style-type: none"> • Social and welfare entities • Municipal agriculture • Records held by producers, processors, markets, retailers, caterers, and consumers
	<ul style="list-style-type: none"> • Food banks, other social and church organizations engaged in food distribution • Food purchase surveys -Food insecurity surveys
<i>Organization responsible</i>	<ul style="list-style-type: none"> • Food banks • Ministry of Health
<i>Tools/Reports Included</i>	<p>See worksheet for:</p> <ul style="list-style-type: none"> • Information on data collection, disaggregation, and analysis. • References and links to reports and tools.

Appendix C – Municipal Development Plan Evaluation and Compliance 2016-2018

Código indicador	FUT	Meta (Descripción)	Indicador (Descripción)	Unidad de medida	Tipo de meta	LB 2015	Meta 2019	Ejecución 2016 - 2018III	Nivel de cumplimiento (%)	Nivel de cumplimiento ajustado (%)	Ponderación meta (%)	Aporte real (%)	Fuente de Información- Responsable	Inversión
41010020016	2	A diciembre de 2019, se aumenta a 360 las sedes educativas públicas y privadas que promocionan y ofertan alimentos de alto valor nutricional en sus tiendas escolares	Sedes educativas públicas y privadas que promocionan y ofertan alimentos de alto valor nutricional en sus tiendas escolares	Número	Incremento	336	360	350	58.33	58.3	0.033	0.019	Secretaría de Salud Pública	338,106,875
41060020003	8	En el período 2018 - 2019, se realizan 8 mercados campesinos y encuentro de productores	Mercados campesinos y encuentro de productores realizados.	Número	Incremento	1	9	6	62.50	62.5	0.142	0.089	Secretaría de Desarrollo Económico	345,044,825
42010040003	9	En el periodo 2016-2019 se mejoran 117 km de vías en la zona urbana como rural de Cali	Vías zona urbana y rural mejoradas	km	Incremento	174.0	291.0	433.9	222.15	100.0	0.550	0.550	Secretaría de Infraestructura	132,386,489,979

Appendix D – Concentration Specific Competency Summary

1. Describe the components of a healthy diet and the national dietary and physical activity recommendations for healthy eating and physical activity.
2. Identify evidence- and/or theory-based approaches for promoting healthy eating and/or active living

State the concentration-specific competencies that you chose for your ALE.

Describe how the planning and implementation of your project demonstrated the knowledge, attitudes, and skills associated with your chosen competencies.

Discuss how knowledge, attitudes, and skills developed in other courses complemented the learning and activities that were achieved in your ALE.

Describe how your deliverable(s) (ie. Presentation, evaluation plan, policy brief, final report, tables and figures, pamphlet, etc) appropriately communicates the public health content from your ALE to the agency and/or intended audience (s).

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