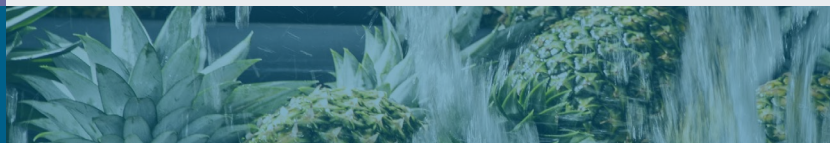© FAO/Alessandra Benedetti

Methodological
innovation

In response to a growing demand for high-quality and internationally comparable statistics, the Food and Agriculture Organization of the United Nations (FAO) develops, implements and promotes methods and standards to guide data producers, both at the country level and inside the Organization, in generating and using sound statistics. FAO is committed to provide national statistical systems with internationally recognized definitions, concepts and classifications as well as methodological guidance for the production of high-quality statistics related to food and agriculture.

FAO also created the Data Lab for statistical innovation to support its statistical system by addressing the specific challenges related to timeliness, granularity and data gaps, and find innovative solutions to generate information relevant for food security, nutrition and agrifood systems transformation, focusing on non-conventional and real-time data sources.

Area of work

> The Data Lab for Statistical Innovation is fostering the use of earth observation, innovative methods and tools for producing official statistics and real-time analytics. It uses machine learning and artificial intelligence to extract non-conventional data from unstructured sources, analyse documents and process data to support decision-making.

> FAO, through its methodological innovation team, provides a service to statistical data users, data producers, statisticians and software developers by disseminating statistical classifications on the Caliper platform in an interoperable way and making them available, searchable and understandable to the widest public possible. It also contributes to the revision processes of the family of international classifications.

> The team integrates the corporate statistical processes within the FAO Statistical Working System to improve the quality of FAO statistical production, methods and outputs, and works in close collaboration with other units on the Sustainable Development Goals (SDGs) process and the implementation of corporate standards.

> Finally, the team contributes to monitoring progress towards the achievement of SDG indicator 12.3.1.a on the Food Loss Index. It is responsible for the methodological advancements and monitoring of the indicator, and for offering support to countries in implementing surveys and collecting data on food losses along the supply chain.

Key outputs

Data collection and dissemination

Data collection and dissemination activities related to monitoring countries' progress against target 12.3 of the SDGs include:

> Food Loss Index compilation and dissemination.

> Food loss data collection and publication from peer-reviewed and grey literature.

Methodological work

> Develop solutions using data science and Big Data methods and tools to improve international agriculture statistics and early warning indicators.

> Revise corporate statistical processes before their integration in the statistical working system in line with the Generic Statistics Business Process Model (GSBPM). The methodological review covers the application of corporate standards and classifications as well as the imputation and validation methods.

> Revise the international classifications and standards used by FAO.

Capacity development

> Provide training and technical assistance to countries to enhance their capacities to implement post-harvest loss surveys, food loss surveys along the supply chain, and to compile SDG indicator 12.3.1.a.

Core objectives

> Develop new methods based on data science that use big data and non-conventional data sources to fill data gaps and produce innovative real-time analytics.

> Leverage earth observation data to produce official agricultural statistics.

> Compile SDG indicator 12.3.1 to monitor food losses along the supply chain and support countries' capacity development.

> Review, innovate and integrate FAO's main statistical processes in the corporate statistical working system.

> Contribute to the implementation of FAO's statistical standards and disseminate statistical classifications in an open link data environment.

Methodological innovation

FURTHER INFORMATION: www.fao.org/about/who-we-are/departments/statistics-division/en/
www.fao.org/datalab/en
www.fao.org/in-action/eostat

>> **FAO statistics**
Food and Agriculture Organization of the United Nations (FAO)