United Nations Economic Commission for Europe (UNECE)

TRADE

Sustainable meat quality and standards – What the United Nations Economic Commission for Europe (UNECE) brings to the table

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Potsdam, August 2019

UNECE Agricultural Standards: Introduction and Overview

TRADE

- **Historical legacy - Period after World War II in UNECE region:**
  - National quality standards regulated trade in agricultural products within each country's national borders
- Existing national regulations were often barriers to the growing international trade within Europe.

- **1949 UNECE –** was Europe's only functioning pan-European body –

  establishes **Working Party on Agricultural Quality Standards**
  - To harmonize national standards into international standards
  - To provide a mechanism for their practical enforcement

UNECE Agricultural Standards: Our Partners

TRADE

- Governments and national, regional and international governmental organizations (such as OECD, Codex, FAO, UNDP, EU, WTO, ITC, UNCTAD)
- Professional organizations and the private sector
- NGOs, donor agencies

Result:
Consensus decisions and including industry concerns helps develop standards that reflect trading practices, rather than normative ideals of what the product requirements should be.

Increased use of standards by industry

UNECE's Agri Quality Framework

- **Over 100 voluntary marketing/quality standards, guides and 1000 experts**
- Many governments introduced quality standards for domestic markets as well as import and export

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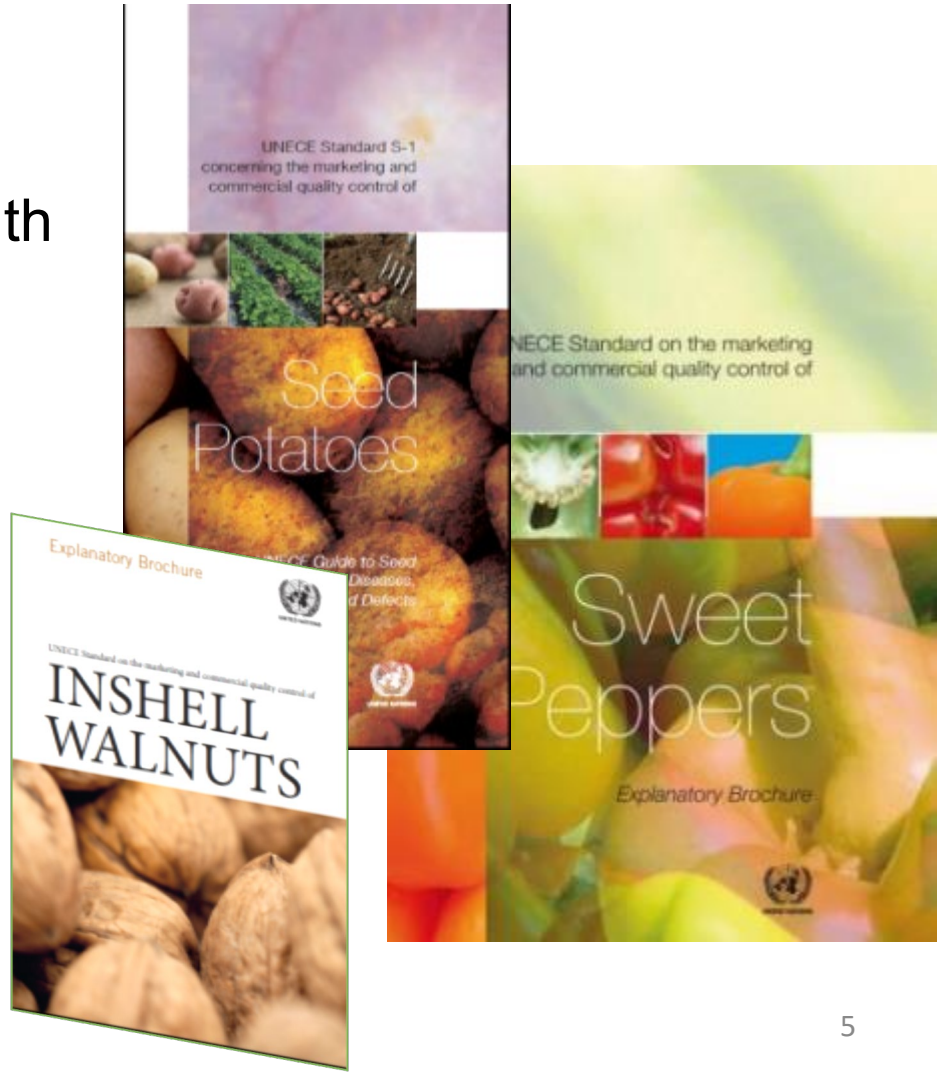
Explanatory guides and Apps

- interpret the standards, help with the grading of produce, ensure uniform interpretation
- reduce risk of rejection, help
- resolve disputes,
- provide guidance (disease guides, terms used, coding references)

for producers, traders, buyers, inspectors



UNECE – Creating voluntary international models and best practice

TRADE

UNECE STANDARDS

Implementing UNECE Standards

Creating international best practice

GOVERNMENT	EU	FAO/WHO Codex Alimentarius	OECD	PRIVATE SECTOR
National Standard	EU Regulation	Codex Standard	Explanatory Brochures	Reference in Contracts

SUSTAINABLE DEVELOPMENT GOALS

17 GOALS TO TRANSFORM OUR WORLD

Priorities

Working towards the SDGs

- Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- Goal 12. Ensure sustainable consumption and production patterns
- Goal 13. Take urgent action to combat climate change and its impacts
- Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

The Future: new challenges and the Sustainable Development Goals

TRADE

What is the business case for helping to achieve the SDGs?
Why does it matter for business or academia or research? And what can business do?

The Future: new challenges and the Sustainable Development Goals

TRADE

- Sustainable trade
- Food Loss
- Market Access
- Food Security

Over the years UNECE has evolved into a platform for the development of agreed international best practice for international and national trade in agricultural produce

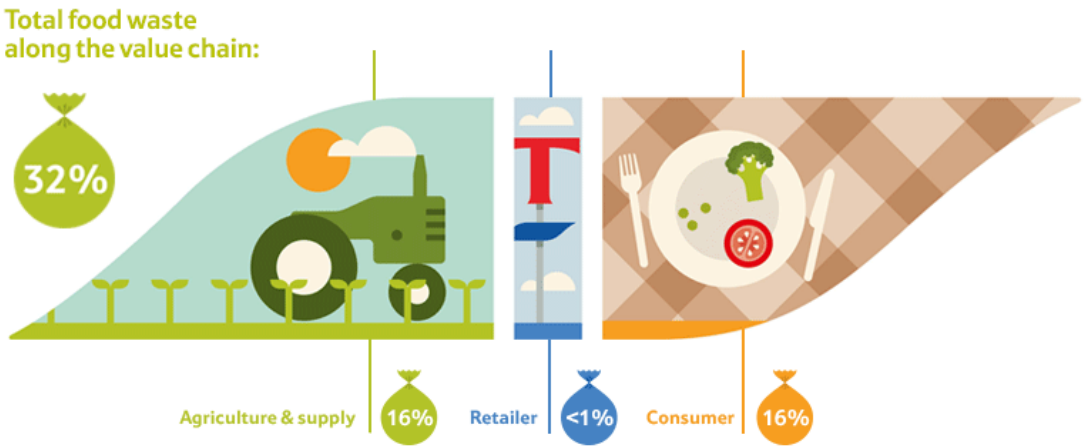
Countries turn to UNECE for advice on regulating their national markets to obtain quality which improves nutrition and food security.

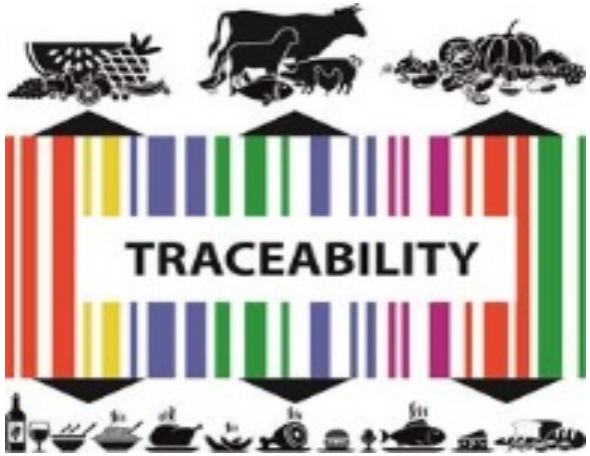
Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life". (World Food Summit, 1996)

CHALLENGES

Today, the UNECE, national, regional, international regulators and the private sector have to take into account:

Concerns of consumers, producers and retailers about the origin of their food, its safety and quality and **the potential waste resulting from technical requirements or standards**





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THE FOOD LOSS/WASTE CHALLENGE IN NUMBERS

1.6
Billion Tons

Food lost and wasted

Source: FAO, BCG Flow model

$1.2
Trillion

Revenue loss

Source: FAO, BCG Flow model

870
Million

Hunger

Source: UN FAO, BCG Flow model

8%

Greenhouse gas emission
(wasted food)

Source: UN FAO, World resources institute

2.1
Billion tons

$1.5
Trillion

PROJECTED INCREASE BY 2030

THE FOOD LOSS/WASTE CHALLENGE IN NUMBERS – THE END CONSUMER

Rich countries:
222 million tons wasted per year

sub-Saharan Africa:
230 million tons net food production

Per year, consumers in rich countries waste almost as much food (222 million t) as the entire net food production of sub-Saharan Africa (230 million t).

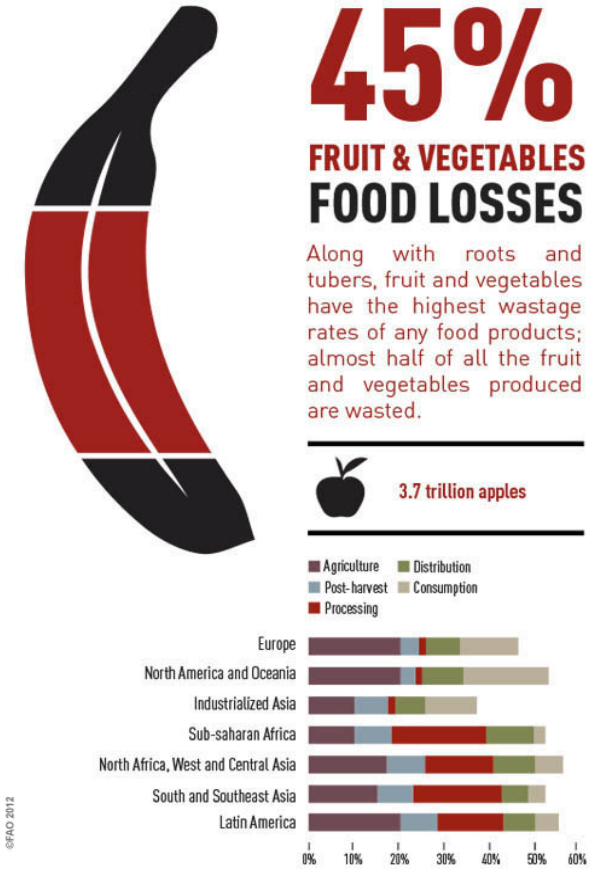
Europe and North America,:
95-115 kg per year per capita waste

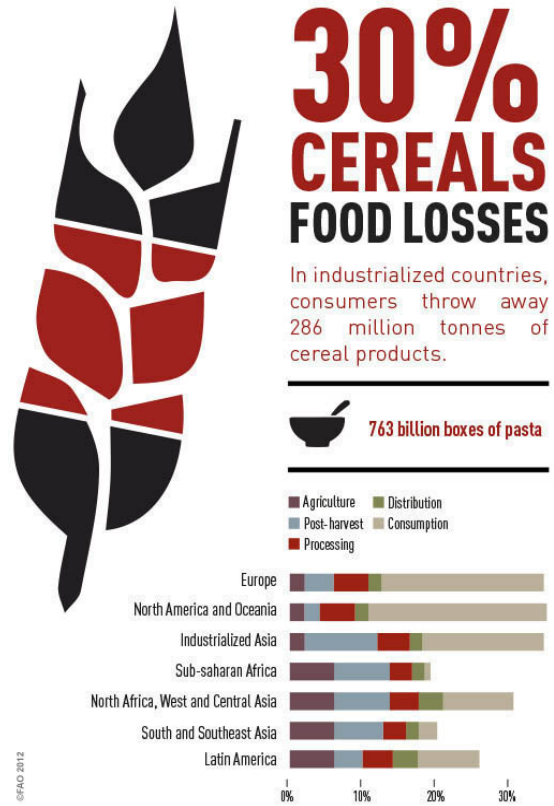
Sub-Saharan Africa:
6-11 kg per year per cap waste

Per capita waste per year by consumer: 95-115 kg Europe/ North America, 6-11 kg Sub-Saharan Africa, South and South-East Asia.

Source: FAO

THE FOOD LOSS/WASTE CHALLENGE IN NUMBERS

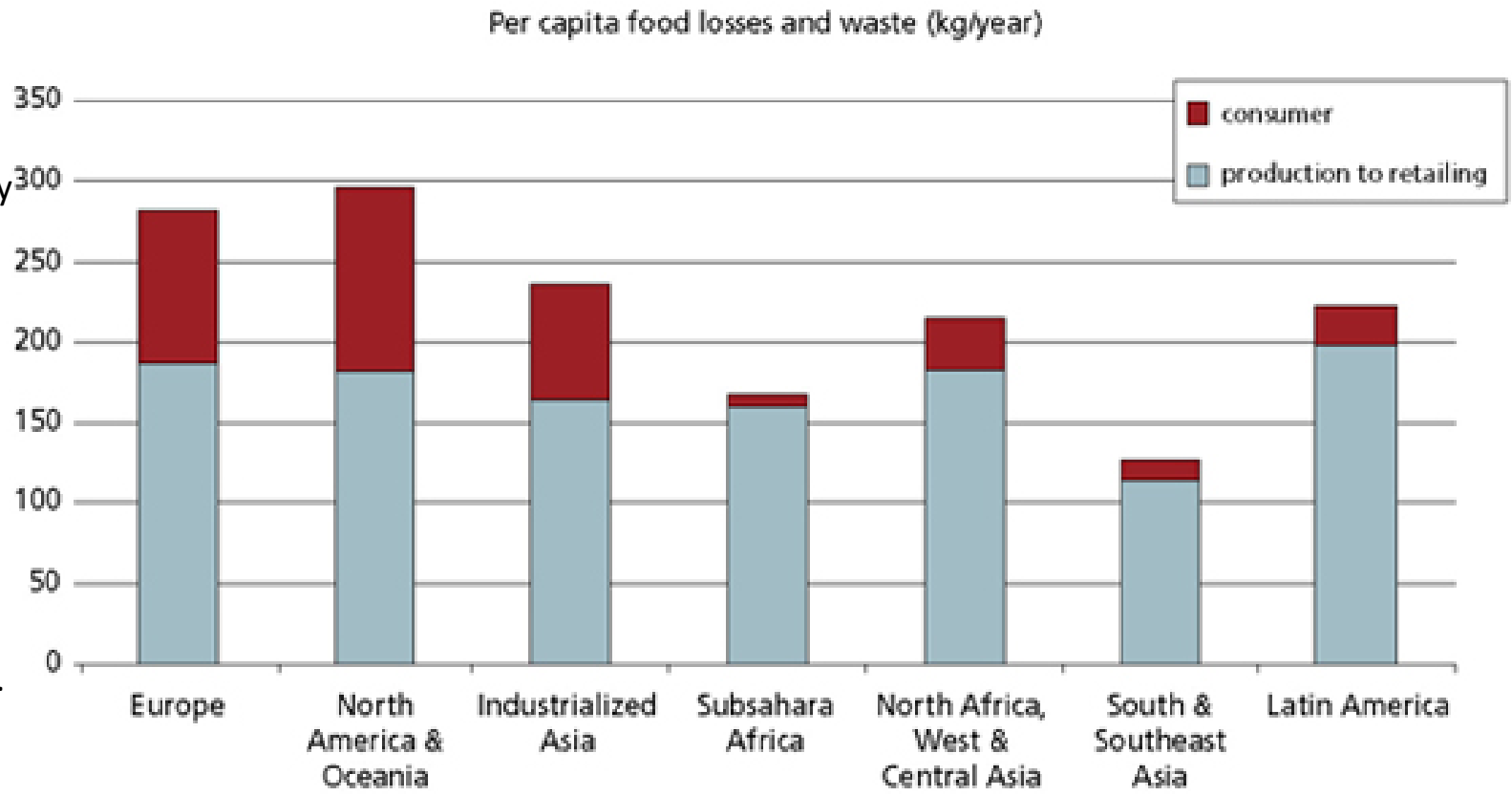




THE FOOD LOSS/WASTE CHALLENGE IN NUMBERS

FOOD LOST AND WASTED – THE WASTE POINTS OF THE SUPPLY CHAIN

Medium- and high-income countries food lost/wasted mainly at later stages of supply chain. Consumers waste more.
In developing countries, losses occur mainly at post-harvest, production, trade levels. Consumers plays a lesser part.

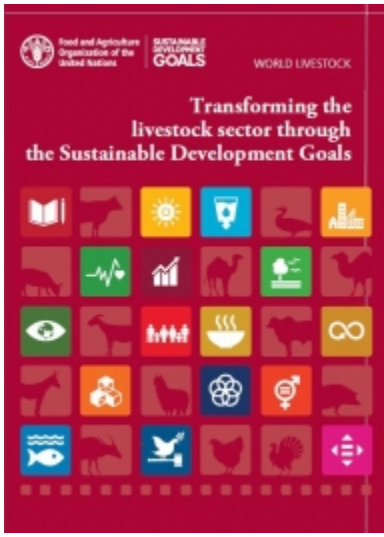


Source: FAO

FAO – Report: Livestock and the United Nations Sustainable Development Goals - Harnessing the power of livestock to drive sustainable development

SCENARIO:

- Currently, livestock production employs at least 1.3 billion people worldwide.
- About 600 million of the world's poorest households keep livestock as an essential source of income
- Between 2000 and 2014, global production of meat rose by 39 percent;
- Meat production is projected to increase another 19% by 2030,
- Livestock production accounts for 40 percent agriculture output in developed countries and 20 percent of agricultural output in developing countries
- The introduction of advanced genetics, feeding systems, animal health controls and other technologies over the past four decades allowed industrialized countries to reduce their overall land requirements for livestock by 20 percent while doubling meat production.



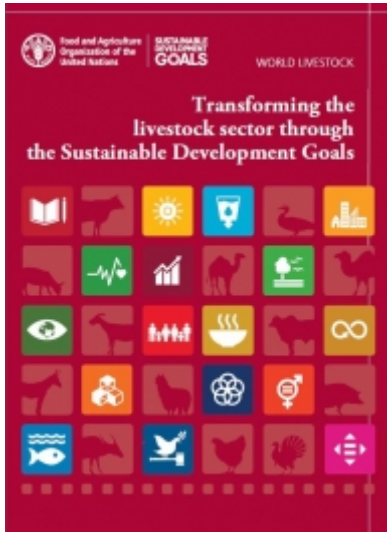
FAO Report – Livestock and the United Nations Sustainable Development Goals

- millions of poor are animal-dependent small-scale producers in developing countries.
- even the most modern post-industrial societies remain critically reliant on animals for food and nutrition security
- **the livestock sector can play a key role in sustainable development by providing food, jobs and income, resilience, and economic opportunities including to women and youth**

but changes in policies and practices can optimize those contributions.

FAO's **World Livestock: Transforming the livestock sector through the Sustainable Development Goals:** debate so far largely focused on how the sector can produce more to satisfy increasing demand for animal products to feed a growing global population while at the same time reducing its environmental footprint.

While a worthwhile objective, FAO's new report argues for a broader and more ambitious approach.
Sector can make major contributions to the 2030 agenda, but important choices have to be made



Source
http://www.fao.org/3/CA1201EN/ca1201en.pdf

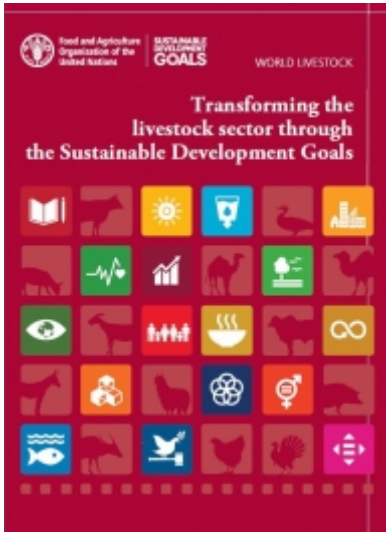
FAO Report – Livestock and the United Nations Sustainable Development Goals

Pre-conditions: addressing several complex interactions including competition over land for the production of feed instead of food; the highly competitive sector through higher levels of market concentration; inclusion vs exclusion of small-producers in domestic and export markets.

Meeting these challenges will require:

- countries to look closely at their national livestock sectors and develop policies tailored to local circumstances and designed to promote equitable growth.

  In particular, measures will be needed to empower smaller-scale producers to ensure they are primary actors in and beneficiaries of the livestock sector's continued growth.



Key challenge in developing countries: livestock sector is highly segmented, with sharply different levels of labour productivity in processing versus production and, within production, between commercial and subsistence farmers.

Source
http://www.fao.org/3/CA1201EN/ca1201en.pdf

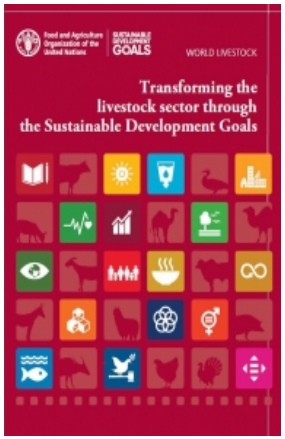
FAO Report – Livestock and the United Nations Sustainable Development Goals

Policies:
improve labour productivity of small-holders and focus on high-value-added and labour-intensive activities in order to unlock the sector's "multiplier effect" in job generation and poverty reduction. Rapid livestock growth does not always translate into fast poverty reduction (needs to be better analysed and addressed).

improve access of smallholders and pastoralists to productive resources, information, technology, training, assets, and credit and to strengthen producer groups.

Trade reforms, investment and innovation will also be needed.

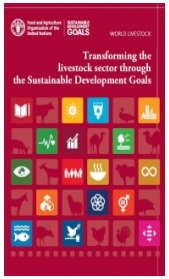
Policies and practices that increase the livestock sector's efficiency and reduce its environmental footprint should be vigorously pursued.



For example, FAO studies estimate **Wider adoption of existing best practices and technologies in feeding, health and husbandry, and manure management - as well as greater use of improved technologies - could help the global livestock sector cut its GHG emissions by as much as 30 percent.**

Source
http://www.fao.org/3/CA1201EN/ca1201en.pdf

FAO Report – Livestock and the United Nations Sustainable Development Goals – escaping the energy trap and escaping under-development and poverty



Alternatives use of cow manure to substitute missing connections to national electricity grids in developing countries (e.g. sub- Saharan Africa and Southern Asia, rural villages and remote areas)

Potential: Poultry, pigs, sheep, cattle and other domesticated animals generate around 85 percent of the world's animal waste

Livestock manure → biogas

renewable fuel source for more than a billion people for domestic use, giving them access to affordable, reliable, and sustainable energy,

Between 2003 and 2013, China built 42 million small household biogas plants run on chicken and cattle manure for light, heating and power. And argri biogas power stations with a daily capacity of 18 000-60 000 kWh.

By 2003, India had already installed some 3.4 million family-size biogas reactors in isolated parts. In 2015, 4 mio family-size biogas plants.

Source
http://www.fao.org/3/CA1201EN/ca1201en.pdf

How does UNECE cover sustainable food trade

In general: through the development of international agricultural quality standards and recommendations for fresh fruit and vegetables, dry and dried produce, meat and seed potatoes for domestic and international trade,

- To reduce transaction costs and risks by providing a standardized description of the product to be traded.
- To keep quality thought the trade chain to the end-consumer
- **To protect producer and consumer interests.**

Keeping quality from farm to fork is an efficient tool to ensure sustainable consumption, prevent food loss and reduce the economic, climate and resource impact of food wasted. and improves the food redistribution and security.

UNECE's Food Loss work

Specific focus: UNECE and the food loss challenge

- Quality matters but constant **review of quality standards** for agricultural produce
- Focus on **losses in the trade process** before it reaches the consumer and even retail
- Designed an **online blockchain-supported marketplace**
- Developed a simple **food loss recording methodology**
- Development of a **Code of Good Practice** on handling fruit and vegetables along the supply chain
- **Comprehensive resource page** on the food loss and waste challenge

REDEFINING THE FOOD LOSS CHALLENGE FOR SUSTAINABLE IMPACT:
PREVENT | REUSE | REPURPOSE | REDISTRIBUTE

Web page: **UNECE and the Food Loss Challenge**
http://www.unece.org/trade/agr/unece-foodlosschallenge.html

UNECE's Food Loss work

Aim :

- Preventing, reducing and **keeping as much food as possible in the human consumption chain**
- **Repurposing and redistributing food to feed all – Recovery and Redistribution (R and R)**
- **Help reach SDG 12.3**

REDEFINING THE FOOD LOSS CHALLENGE FOR SUSTAINABLE IMPACT:
PREVENT | REUSE | REPURPOSE | REDISTRIBUTE

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United Nations Sustainable Development Goals and the Specialized Section on Meat

- Emphasis on linkages to the **meat sector's economic role;**
- **Importance of e-trade to be more inclusive, save costs and improve efficiency**
- **Reduction of environmental impacts and better resource utilization**;
- The product's use for **food and nonfood purposes; the production of high-value protein with otherwise non-utilized resources** (grass); and
- **Specialized Section's standardization of by-products for consumption and further processing.**

- Development of **national sustainability frameworks** and a need to identify **their linkages with components included in the standards**.
- It was also important to **consider possible negative impacts** of e.g. poultry production as well the impact of the new manufactured meat products (artificial protein production).

REDEFINING THE FOOD LOSS CHALLENGE FOR SUSTAINABLE IMPACT:
PREVENT | REUSE | REPURPOSE | REDISTRIBUTE

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

How livestock and meat trade can contribute to sustainable development:

- Generating income and jobs
- Helping to access foreign markets
- Giving rural population and women greater economic opportunities
- Proving high-protein food and boosting children's nutrition
- Better natural resources use efficiency

Source
http://www.fao.org/3/CA1201EN/ca1201en.pdf

United Nations Sustainable Development Goals and the Specialized Section on Meat

Trade relations and international cooperation are more complicated to manage, but the only way to move forward including in reaching SDGs, standardization or research.

Sustainable international e-trade for me(a)t" seminar:

- To show how countries and the private sector develop and use electronic commerce, electronic inspection methods and e-certifications to make trade more efficient, both time- and cost-wise.
- Examples showed that electronic means can enhance the cross-border e-commerce solutions by facilitating procedures. The etrade example presented also showed a new way of applying international standard language
- to facilitate the trade of meat on electronic platforms as well as the need to prepare the meat
- standards for electronic trade.
- Electronic means and tools can be efficient options for the international meat trade today and in the future.

To increase sustainable trade, prevent and reduce food waste caused by produce held back for regulatory or administrative reasons and reduce the risk for fraud.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

UNECE - Managing the food loss challenge

UNECE's Smart Solution to Food Loss

Food loss management system to help trace and quantify the food lost and to distribute the currently "invisible" and unavailable food in alternative food chains.

- In this context, "invisible food" is food removed from the main supply chains for various reasons at different stages.

The primary objective: Quantify, account for systematically , makes available and repurposes to alternative buyers, currently "invisible" produce and generates data to prevent losses and increase sustainable food consumption

THE UNECE FOOD LOSS MANAGEMENT SYSTEM: B2B and B2G

Creating alternative supply chains for food currently lost or wasted along the entire supply chain

SELLERS: Producers, Farmers, Traders, Packers, Importers

BUYERS: traders, packers, hospitality sector, wholesalers, institutional buyers, charity, government

OUR UNECE SOLUTION

An **Online Marketplace for Food Lost or otherwise Wasted for the food supplies that currently go to waste and are removed from the human food production and consumption chain to** that brings all interested parties together. Interested parties are producers, traders, packers and logistic companies, hospitality sector, wholesalers, institutional buyers, charity and government agencies.

A traceability solution through **Blockchain** technology that enables tracking product journey and ensures quality certification validity

BLOCKCHAIN

Actors

Various participating actors(Ex: producer, supplier etc.) in the lifecycle of a produce

Traceability

To track and record the participation of the actors that includes, date, location, profiles etc.

Trust

Transactions that helps anonymous users trust and rate the various actors

Certifications

Certification bodies who can certify the produce quality, norms and standards

Product journey

Information on the entire journey of the product life-cycle

Component 1: The marketplace B2B or B2G –blockchain supported

Farmers

The production level of fruits and vegetables

Distributors

Farmer's direct point of contact for prospective buyers for the fresh produce.

Food Processors

Companies that further process the fresh produce

Packing Stations

Fresh produce packed for various business needs

Wholesalers, Importer

Fresh produce packed for various business needs

Buyers

Supermarkets

Restaurants, caterers, hotels

Processors, By-product Manufacturer

Government procurement

Other businesses including textile industry, vegan market segments

Invisible/Surplus Food

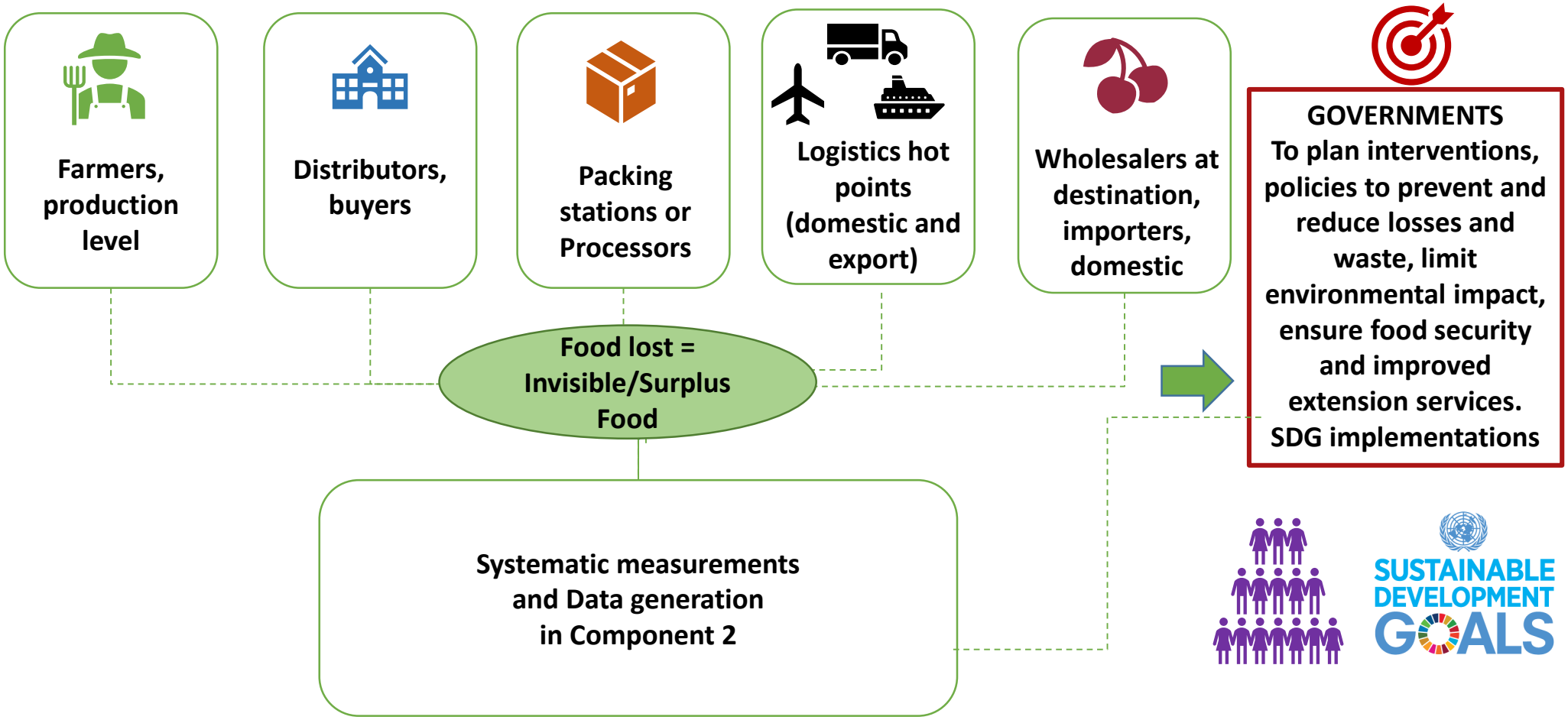
Why invisible/surplus?

- Not matching visual standards.
- Order cancellation Time limitations.
- Excess production

Online Marketplace

Online marketplace that provides opportunity to participants (businesses and governments) of supply chain to sell their Invisible products directly to end consumers.

Component 2: Food loss data generation - the benefits for governments/operators



ONLINE MARKETPLACE

The Steps and phases

- **Scalable and adaptable** model for all countries.
- **Local use first** – cross –border use later
- **Plug-ins for existing systems and methodologies** (e.g. quantification methodologies, traceability or certification).
- At a later stage: possibly, Plug-ins for consumer interface
- **Pilots in selected countries (rural areas and cities)**
- **Strong partners** at domestic level (governments, NGOs. Private sector) to ensure long-term ownership and maintenance

Thank you

TRADE

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