Policy and Regulatory Conditions for FLW Reduction from Agricultural Production to Market Systems

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Food systems transformations and diet transitions are linked to FLW

- Food systems transformations lead to the elongation of food value chain
- Diet diversification into perishable foods with emphasis on food quality (e.g., food safety, cosmetic attributes)
- Gaps in availability of nutritious foods and unaffordability of healthy diets
- Reducing food quality losses and physical FLW of perishable, nutritious foods are central to promoting food systems that deliver affordable, healthy diets
Gaps in nutrient availability exists across global regions

The ratio of nutrient availability to RNI

Ratio of food nutrient availability to recommended nutrient intake in eight global regions.

Wang et al., 2023. DOI: 10.1038/s43016-023-00851-5
Policies specific to FLW reduction

• Institutional policies on food safety and quality standards can drive investment in technologies and best practices

• Investment viability of cold chain, processing, and packaging innovations depends on the business model (e.g., own use, leasing model, as a service)

• Policies on safe labor practices to improve the handling of food volumes (e.g., bulk packaging) and protect food from damage and food quality loss

• Food labeling and messaging policies to clarify food safety and health claims to reduce confusion
Policies to support FLW reduction

• Incentive structures that support collaborative partner networks and address power dynamics related to pricing, quality standards, and contracts are particularly important for perishable foods

• Road infrastructure to connect markets and support the timeliness of food distribution

• Renewable energy investments for cold chains and value chains can help reduce the nutrition-environment tradeoffs

• Communication infrastructure and networks facilitate sharing of FLW reduction approaches, demand and supply information, and facilitate timely transactions

• Equitable access to financial providers and services is essential for supporting equitable access to and implementation of innovative FLE reduction technologies and practices
Managing cosmetic quality vs nutritional quality and environmental sustainability

- Cosmetic attributes are not essential for maintaining quality attributes including taste, performance, nutritive value, food safety

- Suboptimal foods (aka imperfect or “ugly” food) include foods with cosmetic attributes that deviate from what is average/common or that fall below quality standards

- Diverting suboptimal foods earlier on in the value chain may be preferred by producers (e.g., leaving unharvested/on the field, animal feed)

- Policies to create diverse market channels to expand the range of acceptable cosmetic attributes can improve affordability of nutritious foods and reduce environmental impacts
Extent of packaging of fresh foods depends on the market context.

Packaging can reduce FLW but with environmental tradeoffs.

Policies are required to establish and enforce food-grade packaging standards to protect health and the environment.

Regulations on end-of-life stage, the disposal and export of food packaging to ensure equity of food packaging tradeoffs.

Data from Euromonitor Passport, accessed April 7, 2023.