

W E L L - B E I N G
E C O L O G Y
T R A N S F O R M A T I O N

WET 菜市场 共建手册

更健康、更可持续的城市食物环境

WET

M A R K E T

汇聚各相关领域专家的洞见与愿景
给决策者、管理者 and 设计师的指南



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RECOMMENDED CITATION:

**Good Food Fund, Slow Food Great China. 2021. WET
Market Guidebook Summary Version. Beijing, China.**

During the pandemics, in partnership with Slow Food Great China, Good Food Fund established WET Market Global Expert Committee to provide support on drafting this guidebook. The guidebook aims to address long-term challenges faced by the current food system by promoting wet market transformation in China. The guidebook will be updated accordingly. All stakeholders are warmly invited to contribute ideas to support the transformation of wet markets.

**Good Food Fund, China Biodiversity Conservation and
Green Development Foundation**

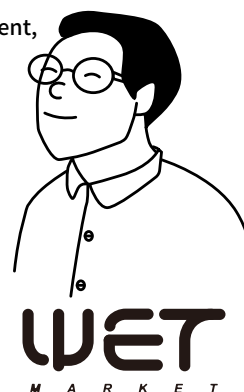
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Preface

2020 is a "special" start of a new decade. COVID Outbreak disrupted our "normal" life and spotlights challenges on the resilience of human society.

In many cities in China, traditional food markets are vital as they are the main access to fresh food. It also plays an important role in strengthening community bonds and improving the livelihood of small-scale farmers.

In the post-pandemic era, many cities have accelerated the transformation and upgrade projects targeting traditional food markets. The mission is to improve sanitation, ensure food safety and minimize the risk of zoonotic diseases.

In the international media, traditional food markets in Asia are often referred to wet markets. After the outbreak of COVID-19, many international groups urged China and other Asian countries to close the wet markets.

However, we believe the wet markets are important urban food system hubs that link up upstream and downstream food value chains.

The landmark Eat-Lancet Commission Report in 2019 suggested three strategies to transform the food system: shifting to a plant-rich Planetary Health Diets, reducing food loss and waste, and improving production practices.

The COVID-19 crisis demonstrates how urgent our food system transformation is and its goal is to promote well-being and ecological sustainability.

Therefore, we proposed the concept of WET Market while WET stands for the initials of Well-being, Ecological Sustainability, and Transformation.

Good Food Fund and Slow Food invited domestic and international experts, policymakers, chefs, NGOs, city planners, and architectures to share their visions of the future of food markets, and contribute to this WET Market Guidebook.

At the beginning of the Decade of Action for the SDGs, the first UN Food Systems Summit scheduled in September 2021 will launch "game-changing solutions" to transform the way the world produces and consumes food.

As a core leadership member of UN Food Systems Summit Action Track 2 "Shifting to Sustainable Consumption Patterns", I lead the workstream of Food Environment and represent Action Track 2 to participate in the action area of Governance and Planning. WET Market Revolution project initiated by the Good Food Fund is an important practice under the two themes, and it has been integrated into the Summit's Summary Table of Game-Changing Propositions. The Summit will unite change-makers with the same mission to make real changes happen together.

We look forward to working with policymakers, communities, and other stakeholders at all levels to promote the transformation of the wet market towards a healthier, more sustainable, and more equitable urban food system hub. UN Food System Summit is about to take place and we need to seize this historic opportunity to demonstrate China's wisdom and leadership to the world.

Jian Yi

Founder and President
of the Good Food Fund
(CBCGDF)





The accelerated decline of agrobiodiversity has been observed since the rapid growth of large-scale industrialized farming in the last century. Three-quarters of plant genetic diversity has been lost. A conservative estimate of the current rate of species loss was 27,000 per year, or about 72 species per day, or about 3 species per hour. Large-scale industrialized farming has threatened our environment and impacted human health. It's worth noting that it also contributes to the reduced size of small farms, which has negatively affected the livelihood of small-scale farmers.

The Slow Food movement originated in Italy in 1986 advocates good, clean and fair food for all. To achieve this goal, we believe food producers deserve respect and consumers should have the right to decide who produces the food, how to produce the food and what kind of food they want to buy.

Slow Food's projects such as The Earth Market, Ark of Taste, and Presidia are all dedicated to promoting positive interactions between producers and consumers, which are vital in ensuring the livelihood of small-scale farmers and advancing responsible consumption.

In the cities in China, traditional food markets are the main access to fresh food.

However, the emerging chain supermarkets, group purchasing, and food delivery services challenged traditional food markets. Thus, traditional food markets have to be upgraded and transformed.

In addition to the infrastructure, the food market also needs to evolve with the changing and complex connection between food supply, modern dietary habits, new lifestyle, and even the whole food chain and global food system.

The mission of Slow Food is highly compatible with the Good Food Pledge. As COVID-19 cases were traced back to traditional food markets, Slow Food Greater China and Good Food Fund launched the WET Market Revolution project. This handbook aiming to provide a practical guide for decision-makers, managers, and designers is the initial product of the project.

In 2020, the vision of the WET Market was presented and discussed at Beijing Design Week and Suzhou Design Week. We would like to collaborate closely with all relevant stakeholders to implement a pilot project soon under the visions of WET Market.

Everyone should be aware that individual food choices do have an impact on the future of our planet. We hope that WET Market transformation would promote everyone's right to good, clean, and fair food and a sustainable and fair food value chain.



Vittorio Qun SUN
Secretary-General of
Slow Food Great China

Acknowledgments

Good Food Fund would like to thank the WET Market Global Expert Committee for contributing their expertise to this guidebook.



In July 2020, "From Mama's Kitchen to Good Food Hub" launched by Good Food Fund was selected from thousands of candidates as one of ten winners of the "Food Systems Vision Prize", which was established by the Rockefeller Foundation, SecondMuse, OpenID, and other organizations. Good Food Fund also participated in a three-month project accelerator with other winners. We are grateful to all the organizations mentioned above that helped us think about how "Mama's kitchen" can fall to the ground in communities and food markets.



Good Food Fund is grateful to Mao Yun Yun, planner for Beijing's College Road Street, the Beijing Design Week team, and the Suzhou International Design Week team for their invaluable support on the implementation of the WET Market Revolution project. Good Food Fund would like to thank the managers and vendors of the Shuangta Market in Suzhou who supported a unique flash mob event where the guidebook was pre-launched. In addition, Good Food Fund is also grateful to Shan Tu who invited us to facilitate the discussion on WET Market in Hack 4 "The Interaction of Humans and Nature: Food - Future Design of Eating" during the 2nd SDG Open Hack at Tsinghua University. Students and mentors exchanged ideas and proposed innovative solutions for WET Market transformation.



Thanks to colleagues from Good Food Fund Huiyu Ouyang, Qing Zhu, Ruonan Li, Yu Liu, Luyue Zheng, and Meina Zhang for their dedication and efforts, and our designer Wanyu Li for her talent work on Good Food Pledge and this guidebook.

COVID-19 Outbreak exacerbated worldwide food insecurity and posed a great health threat to workers in the food system. Therefore, Good Food Fund would like to convey our sincere gratitude and respect for their essential work on ensuring our food supply.



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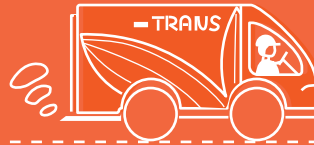
FOOD SYSTEM

According to The Food and Agriculture Organization of the United Nations (FAO) report, it encompasses the entire range of actors and their interlinked value-adding activities involved in the production, aggregation, processing, distribution, consumption, and waste disposal generated from activities in agriculture, forestry or fisheries.

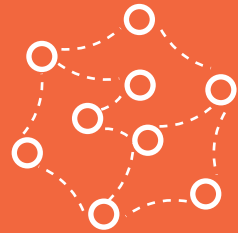
Made mostly from substances extracted from foods, such as fats, starches, added sugars, and hydrogenated fats and contain additives like artificial colors and flavors or stabilizers.

ULTRA-PROCESSED FOOD

Food System ——— Food System



It is composed of sub-systems (e.g. farming system, waste management system, etc.) and interacts with other key systems (e.g. energy system, trade system, health system, etc.).



Glossary

WHOLE FOOD

Refers to food that has been processed or refined as little as possible and is free from additives or other artificial substances. Whole foods include fruits, vegetables, legumes, nuts, seeds, whole grains, meat, fish, and eggs.

MICRO-ENTERPRISE

In China, micro-enterprise is a type of Small and Medium-sized Enterprise (SME).

agriculture, forestry, animal husbandry, and fishery

<500,000 ¥

manufacture

<20 employees

or operating revenue

<3,000,000 ¥

software and information technology

<10 employees

or operating revenue

<500,000 ¥

Micro enterprises have informal organization, few formal financing channels, and little fixed capital.

in the real estate industry with operating revenue

<1,000,000 ¥

or total assets

<20,000,000 ¥

Executive Brief

There is an urgent need to develop sustainable food production because food production has the greatest effect on the Earth system. There is a series of environmental challenges faced by the food system, including climate change, disrupted global nitrogen and phosphorus cycles, -decreased biodiversity, and land use change. These challenges have posed a great threat to the Earth system which food production and human wellbeing closely depend on. Changes in food consumption, such as having a sustainable dietary pattern, is a great start because it can not only decrease the risk of certain diseases but have a positive effect on building a justified society. This will be an important step to achieve SDGs.

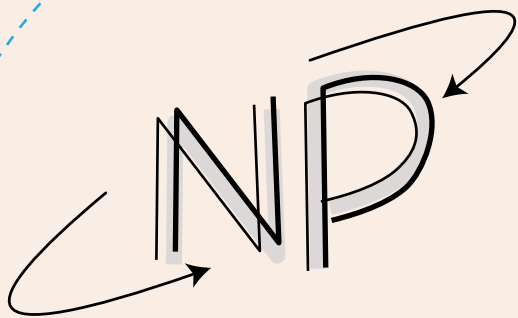
WET MARKET HANDBOOK

Food System Transformation

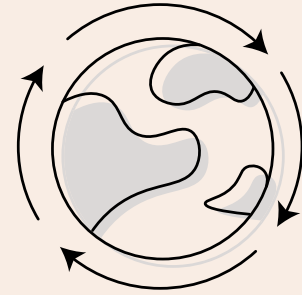
Produce and Consume Food in a Sustainable Way

There is an urgent need to develop sustainable food production because food production has the greatest effect on the Earth system. There is a series of environmental challenges faced by the food system, including climate change, disrupted global nitrogen and phosphorus cycles, decreased biodiversity, and land use change. These challenges have posed a great threat to the Earth system which food production and human wellbeing closely depend on.

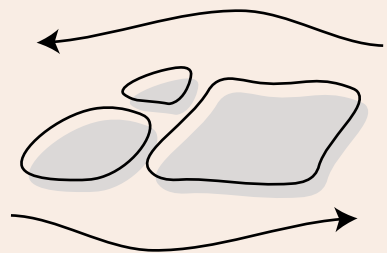
Changes in food consumption, such as having a sustainable dietary pattern, is a great start because it can not only decrease the risk of certain diseases but have a positive effect on building a justified society. This will be an important step to achieve SDGs.



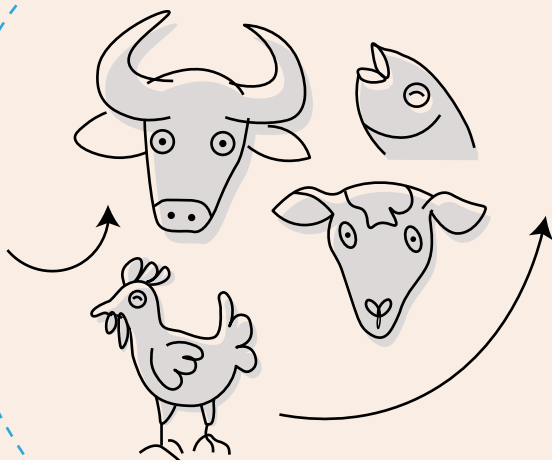
**disrupted global
nitrogen
and phosphorus
cycles**



climate change



land use change



**decreased
biodiversity**

Healthy Diet and Food System

A healthy diet should consider benefits beyond individual levels. Therefore, we would like to highlight the environmental effects of food choices and the contribution of a healthy diet to food system transformation.

While recommendations from the Chinese Dietary Guidelines (2016) mostly consider individual health, the six dietary recommendations presented by Chinese Dietary Guidelines (2016) [1] are highly aligned with a sustainable dietary pattern that has low environmental pressure while promoting individual well-being from all aspects.



Eat a variety of foods, with cereals as the staple

a

Nutrient deficiency can be avoided when consuming a variety of food with rich nutrients that are essential to support a healthy body.

b

Eating a variety of food and local food can challenge monoculture farming, thus promoting agrobiodiversity conservation.



Balance eating and exercise to maintain a healthy body weight



Consume plenty of vegetables, milk, and soybeans



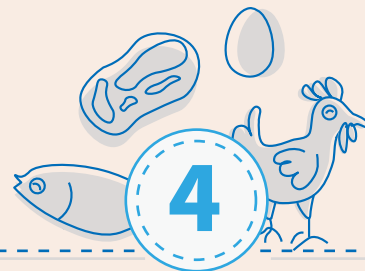
Reduce salt and oil, and limit sugar and alcohol

a

Eating more whole food, such as beans, fresh fruits, and vegetables, and limiting the consumption of animal products and ultra-processed food can decrease our risk of certain diseases, such as obesity and hypertension.

b

Limiting meat consumption can help control greenhouse gas emissions from livestock sectors, further achieving climate mitigation.



Consume an appropriate amount of fish, poultry, eggs, and lean meat



Eliminate food waste and develop a new ethos of diet civilization

a

Reducing food waste directly reduces the waste of energy and nutrients

b

Saving food from waste is a way to save fossil fuels and freshwater that are required for food production, transportation, and distribution. Food waste in landfill also emit the potent greenhouse gas methane and thus eliminating food waste is an effective strategy to mitigate climate change.

The Vision of Food System

In 2019, Good Food Fund, China Biodiversity Conservation and Green Development Foundation launched Good Food Pledge which proposed eight behavior changes that help each citizen to commit to building a sustainable food system. The Good Food Pledge is described as followed [2]:

- Plant forward
- Animal welfare
- Healthy eating
- Reduce waste
- Local seasonal
- Circular economy
- Preserve biodiversity
- Food education



In addition to changes in eating behavior at the individual level, involving government and different stakeholders is crucial to building a sustainable food system. Consensus on the vision of a sustainable food system serves as the foundation. New York City has released a groundbreaking food policy document titled Food Forward NYC: A 10 Year Policy Plan [3]. It sheds some important light for food officers in Chinese cities to learn both goals and strategies on how to build an equitable, sustainable, and healthy food system for all residents. Food Forward NYC is organized around five overarching goals:

1. All New Yorkers have multiple ways to access healthy, affordable, and culturally appropriate food.
2. New York City's food economy drives economic opportunity and provides good jobs.
3. The supply chains that feed New York City are modern, efficient, and resilient.
4. New York City's food is produced, distributed, and disposed of sustainably.
5. Support the systems and knowledge to implement the 10-year food policy plan.



Furthermore, actions on building an equitable, sustainable and healthy food system are essential to advance progress in almost all of the United Nation's Sustainable Development Goals (SDGs) [4].



Strategies for Transforming Our Food System

In 2021, UN Food Systems Summit offers five action tracks to explore key cross-cutting levers of change to deliver progress on all 17 SDGs. It is emphasized that the Action Tracks are not separate and are designed to address possible trade-offs with other tracks to have a synergistic impact.



ACTION TRACK

1

Ensure access to safe nutritious food for all

Promote food security and reduce hunger

Improve access to nutritious food

Making food safer

Slashing food loss and waste and transitioning to a circular economy

Enabling, inspiring, and motivating people to enjoy healthy and sustainable options

ACTION TRACK

2



Shift to sustainable consumption patterns



ACTION TRACK

3

Boost nature-positive production

Protect natural ecosystems

Managing sustainably existing food production systems

ACTION TRACK

4



Advance equitable livelihood

Restore degraded ecosystems

Rebalancing agency within food systems

Eliminating worker exploitation and ensuring decent work in food systems

Localizing food systems



ACTION TRACK

5

Universal food access to build resilience

Food systems resilience

Build resilience to vulnerabilities, shocks, and stress

Climate-resilient development pathways

to food system transformation

WET MARKET GUIDEBOOK

The Role of Wet Market on Food System Transformation

What is Wet Market?

Wet market is a marketplace selling fresh meat, fish, produce, and other perishable goods. Vendors rent a spot to sell agricultural products every day in the market. Wet market is not only an essential food retail spot but also an important public space where people can find affordable and healthy food and chat with friends and neighbors.

MARKET



The following table provides details on the characteristics of the wet market and other food retail outlets.

	Supply chain	Seller	Products	User Portrait	Pro and cons
 WHOLESALE MARKET	Relatively short supply chain Fewer middleman Bulk purchase Price easily influenced by demand and supply market	Three types: 1. Company model, with professional sales staff, who understand the characteristics of their products. 2. Agency model, selling big-brand products and having received sales training from the head office. 3. The scale of operation is small, and most of them are operated by migrants, similar to wet market vendors.	Each booth sells products of a specific category. They tend to sell agricultural products from their hometown and better grasp the supply of goods. The product does not have excessive packaging or advertising information.	Most of them are 2B business. Customers include restaurants, supermarkets, e-commerce platforms, and other stable customer sources, which usually have professional buyers who know the products well and have close relationships with the sellers. The time for large-scale procurement is determined, and the freshness of ingredients is pursued.	The business scale, product categories, and service coverage are wide, and the price is controllable. It is highly irreplaceable in terms of guaranteeing the supply of basic food for urban residents. It directly affects the food safety of the entire city. However, it lacks advanced sanitary conditions and management models.
 WET MARKET	Various suppliers Food imported from various suppliers or produced by vendors themselves	The couple run and own the stall for years Most of the sellers are migrant workers from local villages and towns. Booths are not subject to unified control and can better reflect market conditions.	The products are fresher, with more healthy food such as fruits and vegetables, and fewer processed foods. Lack of professional cold chain storage, shorter procurement time, and greater impact by market fluctuations.	It is dominated by residents in surrounding communities, with a high proportion of regular customers, a high repurchase rate, and close social exchanges.	In addition to being a sales place, it is also a community space and educational hub. It provides market access to small-scale farmers. It also ensures residents' healthy dietary structure and nutritional intake. However, it lacks professional skills such as marketing.
 GROCERY STORES/ SUPERMARKET	A wide range of food suppliers long supply chain	Equipped with professional management and preservation technology. The shop assistants have generally received uniform training. The connection between consumers and shop assistants is weak and consumers generally do not consult or accept suggestions from shop assistants.	In addition to fresh products, semi-finished products, and processed foods account for a high proportion. More marketing advertisements, which can influence consumer's food choice	Customer is diverse but with few social interactions.	Standardized management, with emphasis on the business model. Strong purchasing power. Capacity to assume greater social responsibility. Lack of healthy diet guidance and food education. More food loss and waste.
 ONLINE GROCERY SHOPPING	Most of them apply the supplier model and direct procurement model. They also skip some or all wholesalers, thus shortening the supply chain.	It uses big data to analyze user preferences and make targeted recommendations. It has a limited potential for promoting healthy eating. The technology and management of logistics and cold chain transportation are critical, which directly affect the quality of products that reach consumers.	In addition to basic fresh produce, it provides special agricultural products (i.e, food produced and imported from another country) to attract young customers. They usually emphasize the freshness and uniqueness of their products with "direct sourcing". Also, they invest in visual publicity and marketing advertising which affects consumer judgment.	A wide range of consumers, ranging from young and middle-aged consumers who may lack food knowledge, and rely on product promotion.	Can help farmers distribute products Can recommend healthy recipes based on consumer preferences. The process of placing an order is convenient for the young generation, but it is not friendly to the elderly Difficult to determine product quality for the consumer. Criticized for creating food loss, waste, and overpackaging.
 GROUP PURCHASING	Relatively short supply chain Purchased from farmers directly. Warehouse set to store products	The platform facilitates the purchase and distribution of fresh food The community focal point is responsible for connecting with community members who join to place an order. A "semi-acquaintance" relationship between the community focal point and community members is established to understand the residents' purchase demand for fresh food.	The products are mainly fresh, and the competitive price is the biggest attraction for consumers.	Residents in the surrounding communities who will pick up their orders.	Fresh, high-quality, and cheap fruits and vegetables are delivered to community residents on time and on-demand. The community focal point model provides consumers with a convenient feedback channel. The platform lacks systematic and efficient management Phenomena such as low-price competition and fraud frequently occurs
 FARMERS' MARKET	Local farmers who practice sustainable agriculture sells products No middleman	Well know products they sell, which can promote trust between sellers and consumers. Equipped with basic knowledge on farming, pay attention to a healthy diet. Willing to educate consumers.	Self-produced and sold agricultural products Guaranteed freshness and food safety, which is a common focus of sellers and buyers.	Consumers usually have good eating habits and pay attention to healthy meals. Experience is prioritized over purchase demand.	Support sustainable agriculture Advocate for a specific mission- Serve as a hub for public education Have limited scale and coverage

Challenges Faced by Wet Market

As the economy grows and residents' consumption levels increase, consumers have higher requirements for food quality and safety. This makes the wet market face new challenges:

1

Management improvement

Most wet markets face problems such as outdated management models, unreasonable allocation of funds, and mode of operation found unfit with residents' consumption habits [6].

2

Infrastructure improvement

The traditional wet market has problems such as limited space, waste pollution, noise pollution, poor drainage, and inadequate parking management [6].

3

Threats from supermarkets and E-commerce

The rise of supermarkets and group purchasing has threatened the wet markets by decreasing the diversity of customer groups and an insufficient number of customers.

4

Impact of Covid-19 pandemics

The outbreak of the covid-19 spotlights food safety and live poultry management in wet markets.

5

Policy pressure

The wet market retreat, the urban upgrading policy, and the policy of population regulation have made the wet markets and the non-local food dealers in the wet markets become the target of governance.

Guided by UNFSS' s 5 Actions Tracks, wet market transformation can bring different stakeholders together to create a game-changing solution that has great potential to promote food system transformation in China.

Wet Market and Food System Transformation



ACTION TRACK

1 Ensure access to safe and nutritious food for all

Ensure access to nutritious food

The wet market provides people a wide variety of food with convenient access and most of them are fresh whole food at a price lower than that in the supermarket.

Promote healthy eating

Compared with ultra-processed food added with chemical additives and containing a high amount of sugar and fat, food sold at the wet market becomes fundamental to a healthy diet considering its freshness and minimal processing [7].



ACTION TRACK

2 Shift to sustainable consumption patterns

Promote food education

The wet market promising human connection can have the potential to host food education activities.

Preserving traditional food culture by providing local and seasonal food

The wet market protects the people's livelihood, reflects historical changes of a city, preserves cultural identity and local food culture. All these functions were interconnected with local and seasonal food presented in the wet market.



ACTION TRACK

3 Boost nature - positive production

Build an eco-friendly food retail terminal

Local fresh food reduces greenhouse gas emissions caused by long-distance transportation [8]. At the same time, the wet market can help address the overuse of non-disposable plastic. Furthermore, ugly food that usually is wasted as a trash can be saved in the wet market. For example, blending them into fruit juice, making vegetable packs to increase added value, and being processed as livestock feed [7] [9].



ACTION TRACK

4 Advance equitable livelihood

ACTION TRACK

5



Build resilience to vulnerabilities, shocks, and stress

Secure livelihoods of small-scale farmers

Wet markets secure livelihood for small-scale farmers and distributors which become more vulnerable with the rise of chain supermarkets.

Increase resilience of food system in urban areas

Due to its flexible organizational form and a supply chain that relies on local products, the wet market can respond quickly in emergencies to ensure urban food supply.

It is worth noting that Chinese governments at all levels have realized challenges faced by the wet market and are actively involved in revitalizing the wet market. The initial upgrade is mainly on the improvement of infrastructure in wet markets, while the decision-makers are gradually awakening to the great potential of wet markets in delivering food education, traditional cultural inheritance, strengthening community, and contributing green economic development.

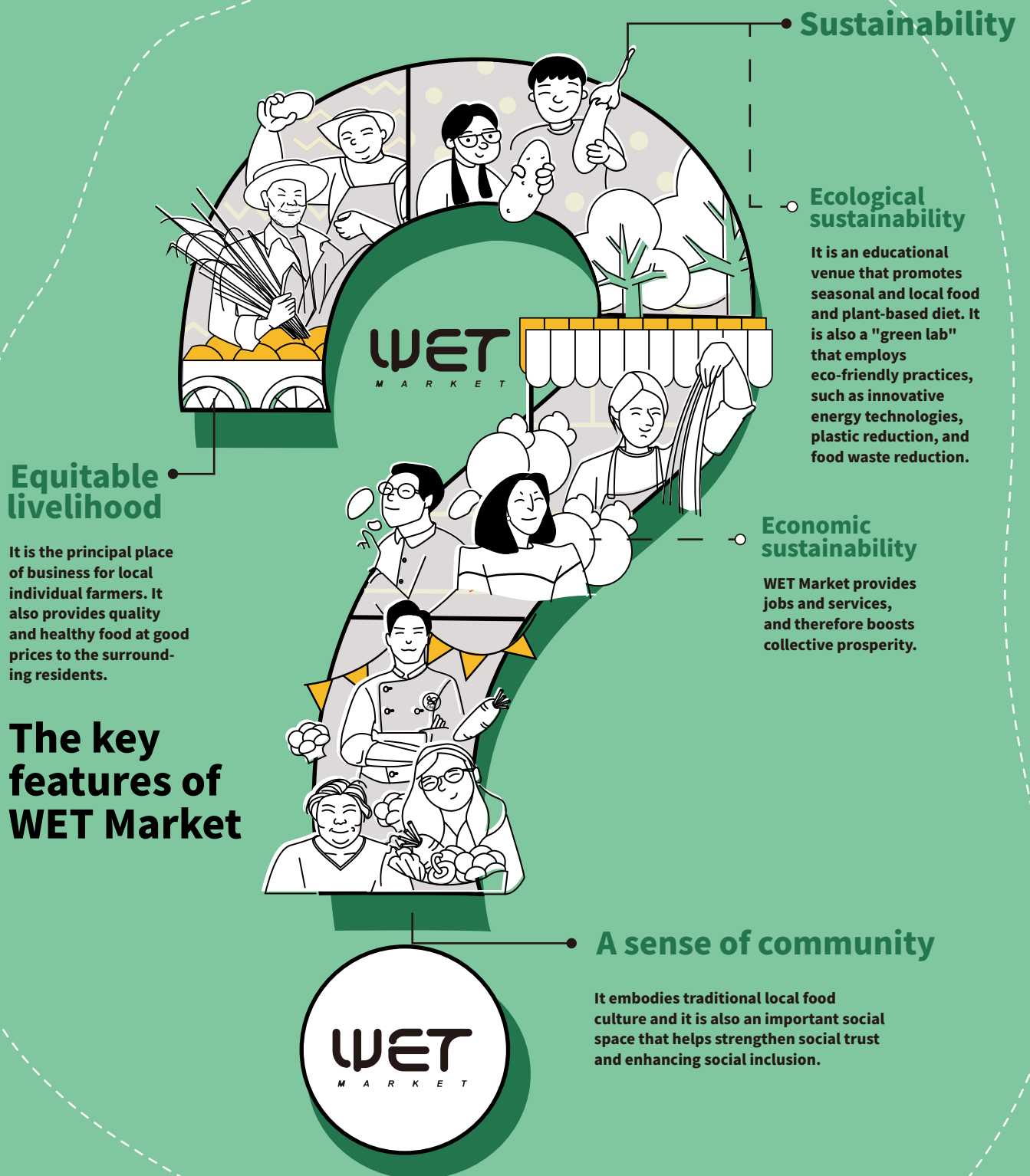
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WET MARKET HANDBOOK

The Vision of WET Market

WET MARKET HANDBOOK

Compared to "standardized" and "smart" food markets, WET Market put more emphasis on its potential for food system transformation.



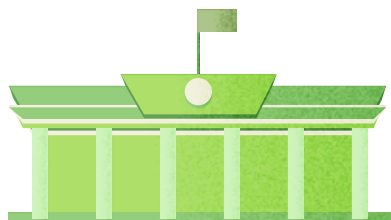
What is WET Market

WET as an acronym stands for Well-being, Ecological Sustainability, and Transformation.

Stakeholder Analysis

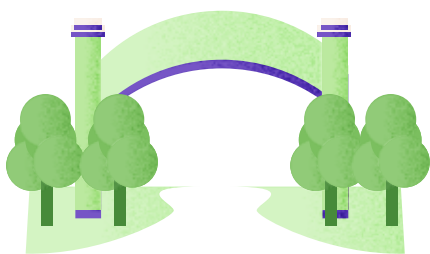
Knowledge, experiences, visions, and efforts from different stakeholders are fundamental for the sustainable development of the WET Market and thus are needed in WET Market.

Governments at different levels



Improve the infrastructure of WER Market, provide policy and financial support, and incorporate it into the performance appraisal

Local communities



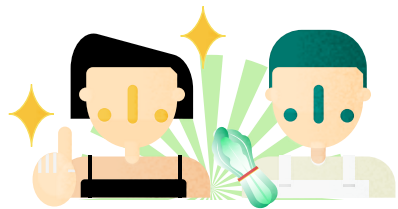
Coordinate with various stakeholders in the WET Market, provide venues and financial support, support community organizations, and mobilize the participation of the residents

Planner, architects, and other technical experts



Sound planning and design of space and functional layout, reserve space for more functions to be developed around the WET Market

Management committees and vendors of the markets



Conduct operation, management, and marketing strategies under the visions of the WET Market

Other food suppliers



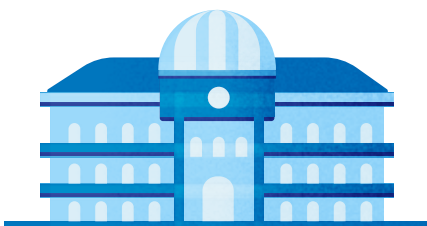
Foster the complementarity of different food supplier

Restaurants and chefs



Participate in the community kitchens in the WET Market to tap the potential of diverse local food, innovate recipes and educate consumers

Schools, universities, and research institutions



Provide supports for technological innovation, organize training and food education activities

Non-profit organizations



Lead the visions, connect resources, provide professional and voluntary services

All relevant stakeholders can contribute to the co-construction of the WET Market

Innovation on Function

A. Trade Zone

Trade zone represents the core function of the WET Market - fresh food sales.

Refrigeration facilities
can reduce the risk of food-borne diseases and decrease food loss. Also, it guarantees that the products in the WET Market are fresh and “good looking” [10]

Infrastructures and facilities such as public toilets, waste management, sewage management, fire hydrant, power supply, and lighting will enhance the shopping experience of customers [10]

User-friendly facilities like barrier-free access and accessible toilets ensure access to healthy food for disabled people and the elderly in the community

Vendors selling vegetables, fruits, seafood, meat, spices, and other products will provide residents with a variety of local and seasonal food to meet the needs of different consumer groups

“Homegrown” counters where temporary vendors selling self-produced local food can help build residents’ connection with agricultural production, the land, and the sea. [11]

B. Education Zone

The Education Zone is a bold reinvention of the WET Market that distinguishes it from traditional food markets. It can either superimpose on the Trade Zone or operate as an independent space in WET Market.

“Good Food · Mama’s Kitchen”
“Good Food · Mama’s Kitchen” (abbreviation: “Mama’s Kitchen”) was launched in early 2020 by Good Food Fund, China Biodiversity Conservation and Green Development Foundation. Based on the Good Food Consensus and the Good Food Pledge, Mama's Kitchen is a healthy, sustainable, and food awakening laboratory/studio/kitchen/classroom, empowering chefs to help create a better future [12]. Mama's Kitchen can revitalize the WET Market by providing visionary ideas for the Education Zone.

Meatless Monday
Mama's Kitchen provides a great platform for Meatless Monday. Meatless Monday was launched in the United States in 2003 to encourage people to reduce meat consumption by starting the week with vegetarian meals on Monday. Meatless Monday helps people understand the relationship between meat consumption, energy consumption, and greenhouse gas emissions. Notably, this practice is in line with dietary recommendations "Eat a variety of foods, with cereals as the staple" and "Consume plenty of vegetables and soybeans". Briefly, Meatless Monday promotes dietary behavior change that considers both human health and planetary health. “Meatless Monday” can be hosted in the Mama's Kitchen at the WET Market [13]:

Multi-functionality is vital for the WET Market. Four themes were proposed as innovative ideas on the functional layout, which are trade zone, education zone, green zone, and service zone.

C. Green Zone

Green Zone aims to transform WET Market into an eco-friendly food sales site.

Solar Power & Water Harvesting
The solar energy area will reduce the consumption of non-renewable resources, while the water harvesting system will realize the ecological value of non-conventional water resources.

Waste Management
Black Soldier Fly helps manage wet market by-products of terrible smelling because it can digest and transform food trash into compost [7]. Meanwhile, the WET Market can encourage vendors and customers to reduce plastic use and thus achieve zero waste [14].

Biogas Digesters
It decomposes food waste and produces methane-rich biogas that can be further used as fertilizer and for electricity generation.

Rooftop garden
Fertilizer produced by Black Soldier Fly and biogas digesters in the WET Market will nourish the soil in the rooftop garden. Consumers could also visit the rooftop garden to learn how to produce food at home and compost kitchen waste.

D. Service Zone

Service Zone aims to provide convenient services to consumers and the vendors in the WET Market.

Mama’s Kitchen@Community Kitchen
Community Kitchen provides convenient services to the staff in WET Market, including mini-fridge, microwave oven, drinking water station, and sink. Inspired by Education Zone such as Good Food Hub, Food Research Hub, and Seed Bank, Community Kitchen can help engage the vendors to learn about the food system proactively by posters.

Finance & Market Information Center
It will feature a televisual/social media unit advertising on behalf of vendors. This will also enable sellers and buyers to know what prices to expect to sell and buy at. ATMs and credit lenders in the center help sellers and farmers secure loans that they can use to upgrade their operations.

Mama’s Kitchen@Frozen Meat
Live poultry trading and slaughter will be prohibited in the WET Market [14]. With Mama's Kitchen, animal welfare will be promoted in the WET Market.

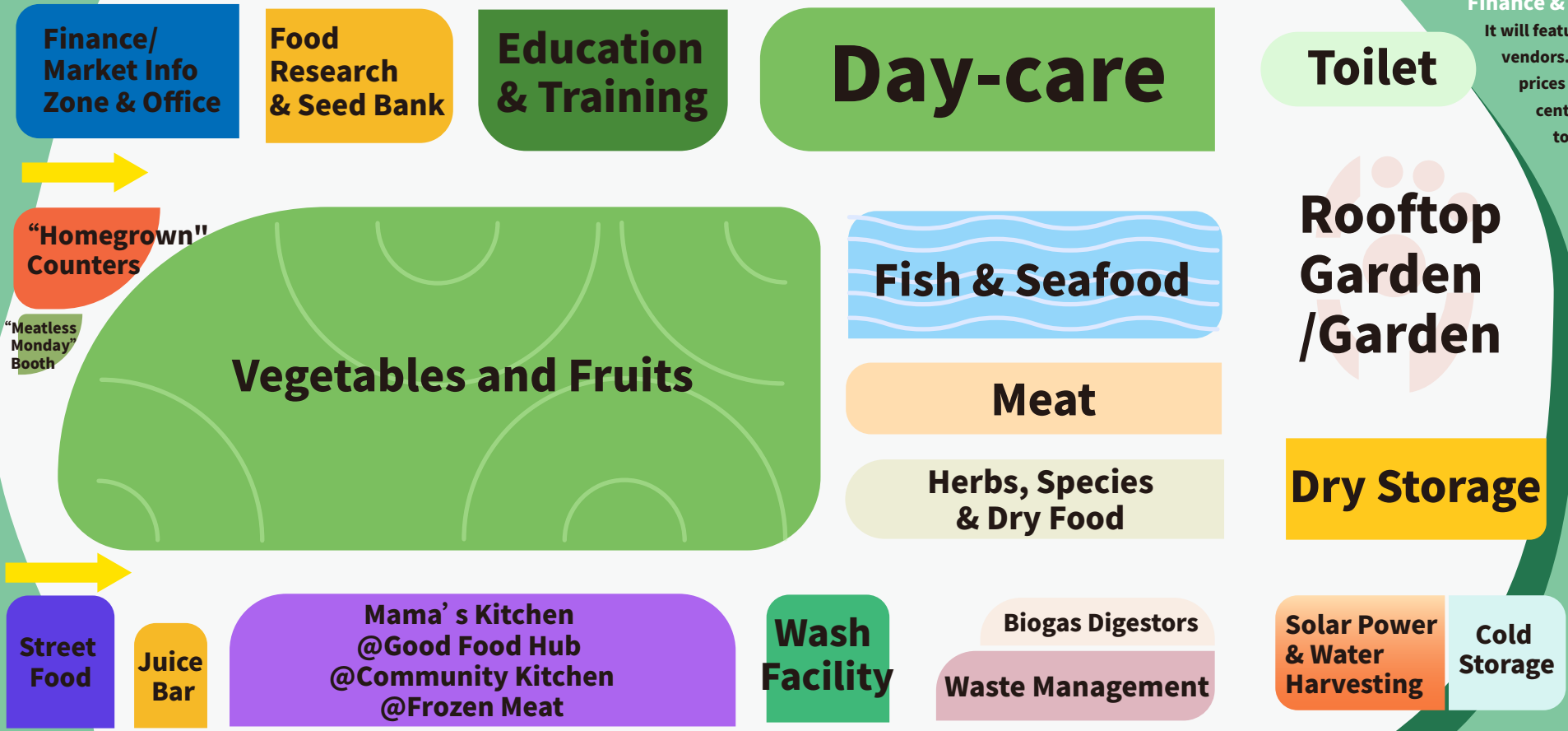
Day Care Center
It will provide childcare to empower women to participate in the market activities and therein redress gender inequality present in rural agricultural [7].

Training Centre
It will provide the WET Market vendors with workshops on various topics, including basic financial skills, farming skills, animal welfare, and dietary recommendations [7].

Street Food
It will provide cooked food dishes made with plant-based ingredients from the market. It can also introduce healthy cultural foods across the world to local residents [7].

Culinary Talent Training
Mama's Kitchen in the WET Market could provide culinary school students internship opportunities. Culinary schools can rent a store with a 6-12 month lease, where students can cook and sell plant-based dishes made with local and seasonal food from the market. The students would also be encouraged to deliver presentations on food system transformation to educate consumers. This is considered as an effective strategy to improve chefs' ecological literacy and to strengthen the connection between chefs, food producers, and food vendors [14].

Food Research Hub & Seed Bank
In collaboration with universities or independent research institutions, WET Market can build a science education hub. Food research hub will play an important role in educating the public about the benefits of eating plant-based foods for individuals. Seed Bank could promote public awareness on agrobiodiversity and its importance for individuals and our ecosystem [7].



Increase consumption of plant-based food: set up a Meatless Monday booth to educate consumers on the benefits of a plant-based diet, distribute coupons for fruits and vegetables, and provide tips on how to start Meatless Monday programs in schools or workplaces.

Connect food producers and consumers: The vendors can put "Good Food Certificate" printed with QR code in front of their booths. By scanning QR codes, consumers can learn how the food is produced and recipes to cook ingredients purchased. The market can also invite local chefs to showcase traditional plant-based dishes.
Provide nutrition education: The Good Food Hub can host a Monday event where consumers can learn the benefits of a plant-based diet from

educators and communicational materials. Dietitians can be invited to offer group consultations. Shopping lists of seasonal vegetables and fruits can be provided to consumers to help them practice a plant-based diet.

A new place for hosting community events: After the WET Market closes, the Good Food Hub can be open to communities to organize events such as cooking classes that highlight traditional plant-based dishes, local restaurants’ vegetarian “pop-up”, and community potlucks.

Meatless Monday Vegetable Truck: Every Monday, a Meatless Monday Vegetable Truck will be deployed in communities to enable easy access to fresh produces for community members who have difficulty getting to the main market, such as the elderly and the disabled people. Educational information on a plant-based diet can be provided as well.

Innovation on Management Model

Establish Food Policy Councils

Food Policy Councils (FPC) are very active in the food system transformation and food policy revision in the United States. It can be defined as networks that represent multiple food system stakeholders and that are either sanctioned by a government body or exist independently of government [15]. They address food-related issues and needs within a city, county, state, tribal, multi-county, or other designated regions with the goal of promoting food system transformation through policy. State and local councils work on a variety of legislative policy priorities, such as land use planning, healthy food access, food production, poverty and hunger, economic and community development, and food procurement.



Considering the context and policies in China, there are some issues that FPCs in China can address:

- Supply seasonal and local food to canteens in small-scale colleges and government agencies, involving them in the local food system as key stakeholders to gain support.
- Lobby for financial support from local governments, which escorts the sustainable development of the WET Market.
- Work actively with researchers in universities to promote evidence-based practices and practice-based researches on food system transformation.
- Increase transparency in the evaluation and monitoring systems of the food system.

Train WET Market Management Committee to Build Organizational Capacity

To better protect the interests of vendors and customers, the management committee of WET Market requires stronger administrative and organizational capacity [10]. Building their skills and confidence can help them to address challenges beyond day-to-day problems and adopt a more expansive vision to manage the WET Market as a whole. By creating more detailed responsibilities for the different officer positions, governance procedures, and clear operational procedures, market associations will have a stronger capacity to manage often individual-minded vendors to work more collectively.



There are numerous tools to help market management committees to improve their management capacity. 4Ms proposed by Richard McCarthy is one of them [16]. 4M represents Mission, Management, Marketing, and Measurement. It helps market management committees to make just decisions to avert conflict, meet expectations, and produce a smoothly operating marketplace for all involved.

Mission

Management

4 M

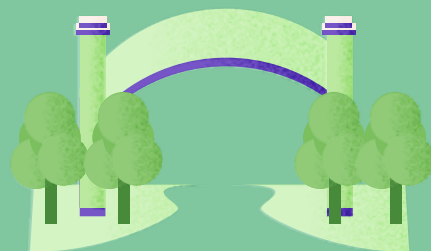
Marketing

Measurement

Invite Communities to Participate in Food Safety Monitoring and Market Management

The neighborhoods of WET Market are not only consumers but can also be partners with the WET Market management committee to make a joint effort on monitoring food safety [10].

FAO is working with a few markets in Dhaka to create 'neighborhood-level food safety committees', which are voluntary organizations made up of community leaders, with the participation of government officials and market associations, to regularly review food safety standards in the WET Market.



Innovation on Business Model

Business model innovation can expand the customer base and scale up the sales of the WET Market. It will also equip smallholder farmers and vendors with business skills, promoting livelihood equity and resilience.



Integrate WET Markets into Wholesale Markets

Building a relationship with wholesale markets will scale up sales of the WET Market and help to support and aggregate agricultural producers into a sophisticated business-smart force of entrepreneurs.



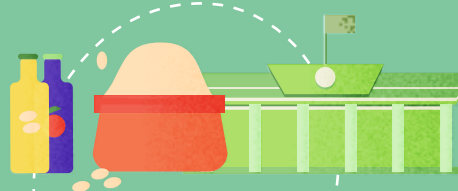
Cooperate with Local Small Restaurants

The WET Market could provide services of food processing to local small restaurants. This will diversify the consumer groups of the WET Market, while local small restaurants will reduce labor costs for processing food. It will also boost the interaction among local small farmers, vendors, restaurants, and communities.



Vouchers for Healthy Food

To promote a healthy diet, policies should address customer demand and increase public awareness on eating healthy food [7]. Vouchers of healthy food can not only achieve this goal but also scale up the sales of the WET Market.



A Public-Private Governance Initiative

A public-private hybrid model of governance has the potential to increase the resilience of the local food supply chain, whilst introducing food safety policies.



Online Platforms for WET Markets

An online platform will satisfy the purchasing needs of consumers in their totality. It would also serve to inform and signal to both producers and buyers in a variety of ways. Over the years, such a platform would be able to provide annual estimates of produce demand, and so in the case of a local drought or disease, it helps to coordinate with other regional platforms to better balance supply and demand.



Micro-business in WET Markets

Inspired by successful cases in Brazil (as elsewhere) that micro-business formation has pulled many people out of poverty, small businesses in WET markets can join taxation initiatives set out by the government voluntarily. In return, they receive access to social protection and business development services [7].

PART 4

WET MARKET GUIDEBOOK

Toolkit

WET Market Self-assessment Checklist

WET Market aims to promote the Good Food Pledge and create game-changing solutions guided by the five action tracks of the UN Food Summit. We proposed the following criteria of a WET Market. Market managers and decision-makers are invited to conduct the self-assessment to understand the sustainability of their market and it could also be a basis for market renovation.



Work Closely with All Relevant Stakeholders and Establish a Food Policy Council



Good Food Pledge

Action Track



Promote a Plant-based Diet



Action Track 1



Plant Forward
Healthy Eating



Over 75% of the products in the WET Market are plant-based



No more than 2% of the products in the WET Market are ultra-processed food



Increase the supply of healthy fresh foods in the WET Market significantly



Apply marketing strategies to promote the consumption of local and seasonal food and healthy food



Promote Animal Welfare



Action Track 1

Action Track 3



Animal Welfare



Raise awareness on animal welfare



Enhance traceability of meat products sold in the WET Market



Review suppliers' animal welfare standards



Prohibit the sale of live poultry in the WET Market



Achieve Zero Waste and Low Energy Consumption



Action Track 3



Reduce waste
Circular economy



Apply innovative methods to use “ugly” and unsellable food (e.g. juices, pre-cut vegetables and fruits packets, composting)



Maintain the balance between food supply and market demand



Prohibit the use of non-biodegradable plastics



Apply innovative technologies to reduce energy consumption



Promote Food Diversity and Traditional Food Culture



Action Track 2

Action Track 3

Action Track 5



Local seasonal

Circular economy

Preserve biodiversity



Over 60% of the products in the WET Market are local and seasonal food



Promote organic food produced from local eco-farmers that practice regenerative agriculture



Practice Food Education



Action Track 1

Action Track 2

Action Track 3



Food Education



Create space dedicated to food education in the WET Market



Organize food education events at least once a month



Promote Equity



Action Track 4



Enhance livelihoods of fixed and mobile vendors in the WET Market



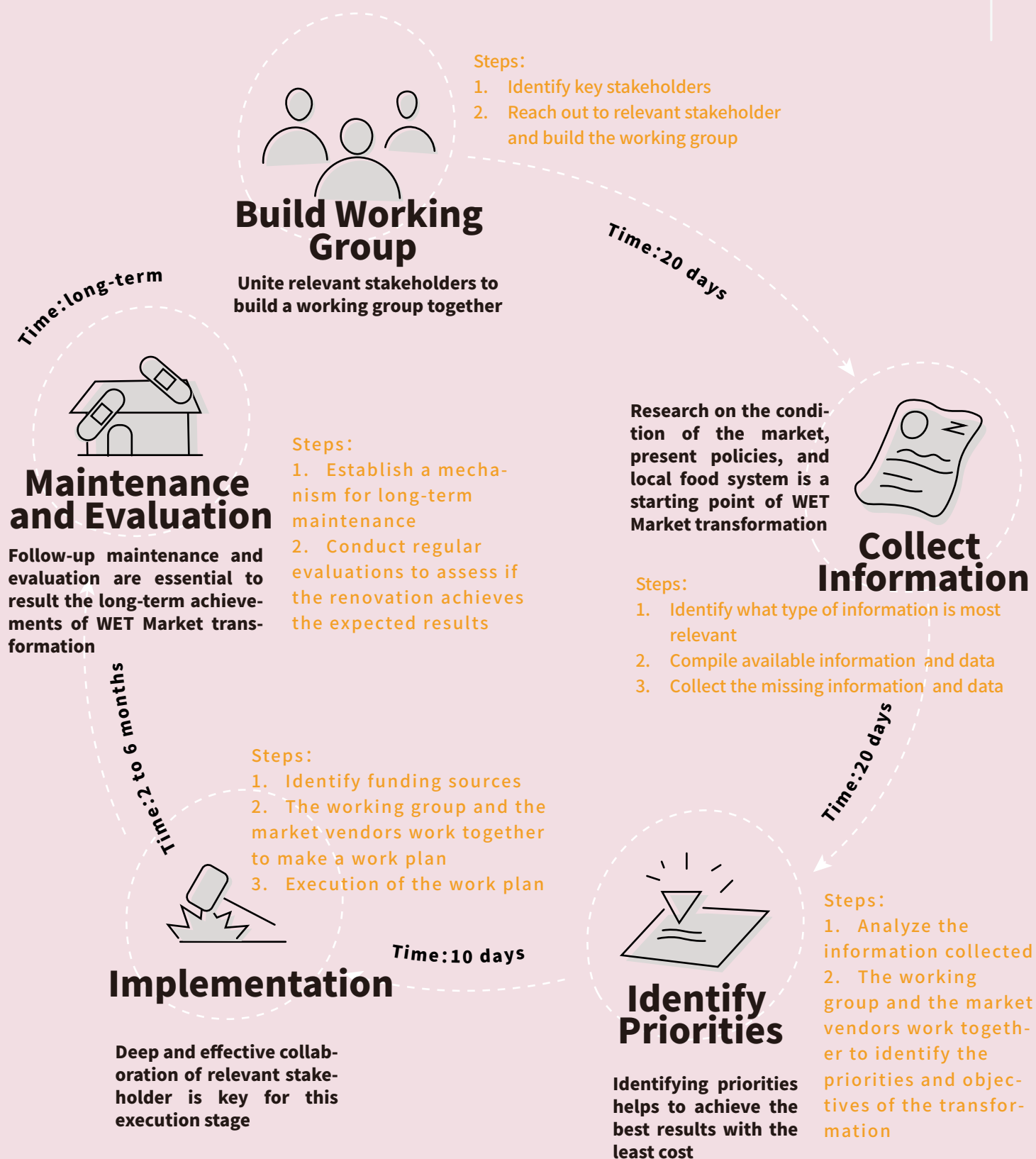
Protect consumer rights



Build handicapped facilities

Steps on WET Market Transformation

The transformation of the WET Market is a long-term project calling for a systematic approach and cooperation of different stakeholders. We encourage each wet market to implement customized transformation that fits each site. Here we present an overview of key steps to initiate WET Market transformation.



Cost-effective Solutions for WET Market Transformation

Most of the wet markets in China face challenges on a lack of funding, human resources, and technology. Thus, we provided the following cost-effective solutions to initiate the transformation.



1

Organize awareness campaign and training about food knowledge for the vendors, including a healthy diet, plant-based diet, traditional food recipe, and others, and at the same time encourage the vendors to share these ideas with their customers.



2

Invite organic food vendors and vegetarian restaurants to organize events at the markets to promote healthy and plant-based food.



3

Collaborate with local communities and schools to implement food education projects.



4

Support the mobile vendors and encourage them to sell local and seasonal food.



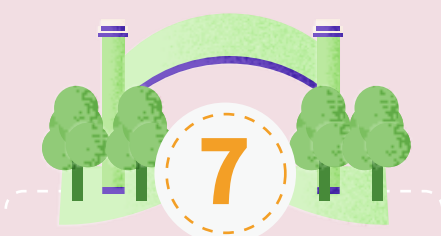
5

Encourage the customers to bring their shopping bags to reduce the use of plastic.



6

Use unsellable vegetables and fruits to make fresh juice to sell in the markets.



7

Invite local communities to participate in food safety monitoring and market management.



8

Provide washed and chopped vegetables and fruits to small restaurants.



9

Join the existing online shopping platform to expand the customer base.

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WET
M A R K E T

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