



Conference Report 2021



**“Fresh food distribution
in the post Covid-19
world: Challenges,
opportunities and
pathways to ensure
resilient and sustainable
food systems and
access to healthy diets”**

Florence, Italy



Mr. Layani, Chairman WUWM

"Is time now to reflect and imagine together how we can provide healthy diets for the planet with a long-term scope. If food security and food system sustainability was already a major topic in political agendas, the Covid pandemic leaves no doubt about the must to collectively act to transform our food systems. We must find pathways to feed our global population with balanced, healthy and nutritious diets, in accordance with cultural and local realities"

Mr. Lucibello Mercafir

"This conference is a key event for our sector to exchange, debate and propose innovative and productive ways of recovering from the current pandemic and be better prepared. Covid has highlighted the need to be aware of risks due to sudden unpredicted crises. Our wholesale markets and most others had the advantage that our infrastructures host a multitude of traders, what gave us more resilience in case one supply-link will fail. Nevertheless, this is the right moment for all the fresh food sector actors to come together and exchange experiences, challenges, and ways to improve our system and reduce disruptions in case of future crisis"



Mr. Nardella, Mayor of Florence, President of Eurocities

"We need to create sustainable supply as a response to the food emergency the world is currently facing. Transforming tomorrow's food systems is a complex task, I believe that the Covid-19 crisis is also an opportunity to adapt our approaches. Cities are making big efforts to create sustainable food systems, providing healthy and accessible food for all, protecting biodiversity and fighting food waste!"



Executive summary



While the world's population is rapidly increasing, and land degradation is exacerbated by climate change, it is clear that ensuring food security will be among the key challenges of the 21st century. In 2050, the world's population is projected to increase to 9.8 billion from 7.6 billion with 75% of the population expected to live in cities. Simultaneously, 70% of all agricultural land globally will experience degradation. These challenges will exist alongside rising food prices and a growing demand for increased supply and diversification of food.

Today, there is a need to develop both new and innovative approaches to production and supply in order to cater to a growing population while also upholding sustainability and environmental responsibility. This also necessitates the use of smarter logistics, improvements in urban planning, and major investments in food infrastructures to build an ecosystem that can continuously supply food that is safe, affordable, healthy, and sustainable.

The World Union of Wholesale Markets (WUWM) organized this conference to exchange, debate and propose innovative and effective ways to recover from the adverse effects of the COVID crisis.

The 2021 WUWM Conference, held in Florence (Italy) was titled "Fresh food distribution in the post Covid-19 world: Challenges, opportunities and pathways to ensure resilient and sustainable food systems and access to healthy diets". It gathered over 70 people on-site and 350 online, covering the entire spectrum of food systems: from wholesale and retail markets representatives, logisticians, start-ups, academia, governments officials, international organizations, NGOs, the private sector and more.

Together, high ranked experts exchanged their experiences during the pandemic, debated on lessons learned and propose innovative solutions to address the sector's most pressing challenges.

Covering a wide array of topics from reflections on the future of food in the post-Covid-10 world, as: how to ensure a sustainable fresh food logistics, innovation for resilience in the food supply chain, how to ensure accurate availability of healthy diets in a highly urbanized world whilst fostering better eating consumption patterns.

The conference managed to define key issues and chart the path for a sustainable future of food systems. During the Global Conference, a Memorandum of Understanding (MoU) was signed between WUWM and UN-Habitat, supporting a common objective to improve urban-rural linkages for resilient, inclusive and sustainable territorial food systems, as key components of a sustainable future.

Plenary sessions summaries

Plenary 1 : Healthy Diets for the Planet : Challenges and pathways to ensure sustainable food systems worldwide

The first plenary session was centered on the need to ensure sustainable food systems worldwide and the ways in which this transformation could be achieved. The speakers in this session were Qu Dongyu, General Director of the FAO, Stéphane Layani, Chairman of WUWM, Martin Frick, Deputy to the Special Envoy for the UN Food Systems Summit 2021 and Fabio Massimo Pallottini, Chairman of Italmercati .

FAO General Director Mr. Qu Dongyu emphasized the negative effects the pandemic had on food systems worldwide, pointing out that Covid-19 sheds a light on the weaknesses of the food sector; the need for significant investments in upgrading essential food market infrastructures and all the challenges that the sector has to tackle in order to successfully achieve the transition towards sustainability and resilience.



Mr. Qu Dongyu highlighted that today healthy diets are not affordable for about 3 billion people worldwide. This state of affairs was exacerbated by the pandemic, due to the increase in price of some products, most notably highly nutritious foods like fruits and vegetables. Healthy diets are estimated to cost 5 times more than a calorie sufficient diet and 60% more than a nutrition sufficient diet. With the unpredictability of external shocks such as conflicts, climate-related hazards and pandemics, the food sector has to find ways to prepare for outside threats in order to ensure continuous affordability, resilience and sustainability. Thus, he pursue, we need to combine vertical and horizontal cooperation, with the integration of local actors, will enable better coherence and effectiveness in the implementation of actions to transform agri-food systems.

Mr. Qu Dongyu stated that FAO recognize that wholesale markets are at the cornerstone of food systems, and said that they believe that wholesale markets can have a significant impact in ensuring food safety, as they have the capacity and the mandate to deliver nutritious and diversified food to local populations, while ensuring better access to markets to small-holder farmers.

This role has been further highlighted with the Covid-19 pandemic in which countries with wholesale markets experienced less disruptions, price volatility and food shortages compared to those that did not have wholesale markets with effective and modern infrastructures. Because of this potential of wholesale markets, Mr. Dongyu explained that upgrading wholesale markets is a priority. That is also why WUWM is collaborating with the FAO investment center in order to identify areas of investment for the modernization of wholesale markets.

“Covid-19 sheds a light on the weaknesses of the food sector; the need for significant investments in upgrading essential food market infrastructures and all the challenges that the sector has to tackle in order to successfully achieve the transition towards sustainability and resilience” -Mr. Qu Dongyu

Mr. Layani pointed out three major groups of issues that needed fixing in order to ensure food security in the forthcoming decades. He also highlighted that these topics have been identified over the course of the four independent dialogues in Africa, Asia, Europe and Latin-America, which were organized by WUWM and gathered more than 300 actors of the agri-food chain.

The major challenges relate to accessibility, affordability and sustainability. Wholesale markets are key actors in solving or alleviating these issues. Mr. Layani stated, "Wholesale markets play a crucial role in structuring upstream and downstream fresh food actors, shortening supply chains and providing easier access to markets for farmers; they allow for a greater diversity of fresh food, ensure the transparency of prices, contribute to circular economy and waste management and facilitate the traceability of products."

Mr. Layani also spoke about the need to change eating consumption patterns worldwide, and for this the need of making it easier for citizens to choose healthier eating options. In this sense he presented WUWM initiatives to promote the intake of fresh products, like "Love Your Local Market Initiative" that aims at promoting local fresh food markets and also the need for governments to support diversified food environments with more availability of healthy products.

Mr. Frick then spoke. around inclusivity, pointing out today's absurdity of our food systems, where more than 80% of the world's most food insecure people are actually food producers or in food distribution. He pursued that to achieve the sustainable development goals, we

pledge to leave no one behind. An inclusive approach, according to Mr. Frick, would be systemic, would take into account affordability and accessibility and would bring together all relevant stakeholders. He concluded by stating that wholesale markets are at the very heart of food systems transformation.

Mr. Frick's intervention was followed by the speech of Mr. Pallottini that pointed out two lessons that the pandemic had taught to the Italian network of wholesale markets. He stated: "We have learned that food distribution is fundamental. If cities were not hit as hard by the pandemic, it's thanks to our supply chains, which showed resilience. Secondly, people have become increasingly curious and concerned about the origin of their food. Our infrastructures can play a key role to guarantee traceability and inform better citizens about what they eat".



“Wholesale markets play a crucial role in structuring upstream and downstream fresh food actors, shortening supply chains and providing easier access to markets for farmers”

Mr Layani

Plenary 2 : The future of food in the post-covid-19 world

The second plenary session dealt with the future of food in a world that had just gone through a pandemic. The speakers in this session were Carolyn Steel, Food system expert and Author of *Sitopia* – How food can change the world, Ma Zengjun, President of the China Agriculture Wholesale Association (CAWA) and former Chairman of WUWM, Lawrence Haddad, Executive Director at the Global Alliance for Improved Nutrition (GAIN), Jamie Morrison, Director of the Food Systems and Food Safety Division at the FAO and Andrea Segrè, Professor of International Agricultural Policy and Member of the Italian Ministry of Foreign Affairs. Together, they agreed on the fact that the Covid-19 pandemic crisis could be the opportunity to change how people think, buy and consume food, and to reflect in new ways to make our food systems sustainable, more local and provide healthy food to all.

Carolyn Steel showed by a comparative historic approach how food shaped societies through human history, stating that food is the great connector of our lives and societies and pointing out that of the 200,000 years that *Homo sapiens* has been on earth, we've only been farming for 12,000 years and living in cities for 5,500, so our experience of urban-agrarian living is relatively short.

Ms Steel expressed that food is by far the most powerful tool and lens to deal with the extraordinary global challenges we now face and pointed out that the pandemic reminded us that we live in a world defined by food: our bodies, habits, homes, cities, landscapes, economies and politics are influenced by food. Ms Steel pursued by saying that how we should dwell on earth is a fundamental question "As humans, we have a set of needs for things such as food, water, energy and materials, all of which come from the natural world. In the past, we made our homes where such things could be found: in other words, we dwelt in places capable of sustaining us". However, fast and cheap food is becoming increasingly important. «To degrade food,» she asserted, "is to degrade life." Climate change, mass extinction, deforestation, soil depletion, pollution, pandemics and food-related diseases are just some of the externalities that depend on the way we eat.

She stated "if you list some of the externalities of so-called cheap food – climate change, deforestation, mass extinction, pollution, soil degradation, water depletion, declining fish stocks, obesity, diet-related disease and zoonotic pandemics – it soon becomes clear that there is no such thing".

Ms Steel pursued by stating that ever since the industrial revolution, however, we've increasingly lived in places that can't sustain us – especially large cities – on the assumption that we'll be able to import our food and other needs from elsewhere. This is the phenomenon that she calls 'urban paradox': the fact that those of us who live in cities think of ourselves as urban, forgetting that most



“Today we have a really great opportunity to elevate the voices of urban and local actors and to make them play a great role in food governance”

Jamie Morrison

of our food and other resources come from elsewhere. Introducing her other concept, "Sitopia", she specified that according to her, we live in a world that revolves around food, and when the way we eat, produce and

buy food is problematic; our whole world suffers from it. In this sense Ms. Steel highlighted that our current relationship to food is unhealthy: we've come to expect it to be cheap, thus cheapening life itself.

The closing of bars, restaurants, and take-out businesses during the pandemic has led to an unusual food renaissance, with many people discovering the pleasure of taking time to cook. This cultural shift provides us with a generational opportunity to rebalance our lives, rethink our relationship with nature and recalibrate the urban-rural relationship. We can create a new scenario based on regenerative agriculture and more regional and seasonal food systems that will establish closer ties between the countryside and cities. In this context wholesale markets play a key role of linking rural and cities again.



As a solution to this problem, she talked about the role wholesale markets could play in reminding people of the true value of good, healthy, and more locally produced food by making fresh, high quality food more available.

Mrs. Steel Intervention was followed by the intervention of Mr. Zengjun that focused in innovation, more specifically through digitalization and e-commerce. According to him Covid-19 accelerated the digitalization of wholesale markets in China and had an impact on the logistics and the supply chain overall. He argued that consumer habits have changed with the pandemic, and that wholesale markets need to adapt by, for instance, developing new frameworks to improve the quality control of food.

Dr. Haddad then took the stage to discuss problematic eating patterns that have developed during the pandemic. Overall, he said that "people are consuming less food and people are consuming worse food. For him this is partially due to the fact that small and medium enterprises have not been taken into account during the pandemic"

Dr. Haddad stated that "We haven't really seen the response that we need to see in terms of getting finance to SMEs. Especially those that are really vital for keeping safe and nutritious food flowing through the food system"

In this sense he pointed out that wholesalers and retailers are critical food environment actors —where consumers come face to face with food and vital for keeping safe and nutritious food flowing through the food system. He stated "Consumers have preferences and they need choices. In this sense Mr Haddad pointed out that retailers can create healthy food environments by how they organize physical layouts and via their price promotions. Wholesalers can aggregate food from small producers in ways that allow small producers to have access to fresh food markets, e.g. via community cooling hubs. Wholesalers can reward SMEs producing healthy and sustainable food with preferential contracts and terms (e.g. rental space and utility bills)

Dr. Morrison discussed a recent survey by the FAO showing that cities play a major role in limiting the effects of the pandemic on the health and food security of their citizens and that cities have enormous potential when it comes to the food system transformation. Nevertheless, in his opinion cities are doing a lot and they are often not supported. He stressed that there is an urgent need to recognize and support the catalytic role that cities have in the overall food system transformation, concluding that today "we have a really great opportunity to elevate the voices of urban and local actors and to make them play a great role in food governance"

Dr. Segrè closed the sessions, focusing in food waste reduction, adding that this is among the most pressing issue our food systems face today. "Food waste would be the third largest polluter after the US and China if it was a country" he stated. Dr. Segrè shared Italian case to reduce food waste and emphasized that better logistics and shorter supply chains are among the solution for this challenge. In this regard wholesale markets can play an important role to ensure better logistics and scale-up a circular economy approach aiming to achieve zero waste.

"To degrade food is to degrade life."

Carolyn Steel

Roundtable summaries

1. Tackling the challenges of Covid-19 : Lessons learned and opportunities to improve sustainability in the food system

The first roundtable focused on what had been learned from the pandemic and the ways in which it could be used to improve sustainability in the food system. This roundtable was chaired by Jordi Valls, Managing Director of Mercabarna and the speakers included, Dolores Roman Gallego, Director of Corporate Development at Mercamadrid, Arturo Salvador Fernandez Martinez, WUWM Americas Regional Group Leader and President of FLAMA, and James Tefft, Senior Advisor at the FAO Investment Centre.

In this roundtable various successful approaches that wholesale markets have taken to combat the challenges of the pandemic were presented and discussed.

Ms. Roman Gallego mentioned that Mercamadrid based its crisis management strategy on four pillars: information, coordination, transparency, and discipline/control. Rapidly after the pandemic outbreak they applied online trainings for staff and increased the spread of information to be aware of the latest updates and solutions to disruption problems. Ms Roman Gallego pointed out that the pandemic led to the following lessons in her wholesale market:

- Fostering the development of multiple channels to operate is crucial to adapt to rapid changing situations. The increase of online selling was in this regard one of the major successful adaptations.
- The need of a multistakeholder crisis task groups that allowed fluid and rapid communication and adaptation to problems with rapid decision making,
- A strong and diversified supply network: wholesale markets showed to be more resilient during the pandemic in comparison to big retailer platforms

Ms Roman Gallego believes that in order to ensure a better work wholesale markets they should concentrate

on three major subjects: digitalization, sustainability, and internationalization.

Arturo Fernandez, Director of Americas Group at WUWM and President of the Latin America Federation of Wholesale markets (FLAMA) and Mario Rivero from FLAMA added that collaborations among wholesale markets have played and will play a key role in creating resilient wholesale markets. He explained that during the pandemic a wide range of markets of his region worked together to support one another through a WhatsApp group and a digital platform to exchange problems, ideas and good practices. Today in the Americas region the members are promoting three key ideas to advance wholesale markets:

1. Establishing alliances between agri-food organizations, such as the collaboration between FLAMA and the FAO on how to improve the Latin American food system together, also in the context of the pandemic
2. Create a hub for innovations and collaborations that can be applied among wholesale markets and other stakeholders (local farmers, universities, start-ups), test them in some markets and scale them up if they succeed.
3. Establishing partnerships to reduce food waste and examining the measures to take for accomplishing this

James Tefft from FAO's Investment Centre introduced the work that WUWM is doing in collaborating with the FAO Investment Centre called "Upgrading wholesale food markets for food system resilience in the 21st century". This study will examine 35 markets in over 30 countries and look at wholesale markets ranging from traditional producer markets to more modern, multi-functional facilities, and will extend across several FAO units, and with FAO's partners including the World Bank, EBRD, ADB, and AfDB.



Mr Tefft highlighted some of the initial findings of the study, he started by mentioning that the world is rapidly urbanizing, especially in Africa and Asia. This is

not just happening in the largest cities, but there is also rapid growth in secondary towns and cities. Along with urbanization, food consumption and demand are equally rising. It is therefore crucial to look at our food system infrastructure and its distribution channels. In this FAO study, wholesale markets have been identified as critical in efficiently and resiliently supplying rapidly growing cities and allowing food systems to be ready for crisis. Wholesale markets are at the core of traditional channels supplying most rapidly urbanizing contexts.

Mr. Tefft also stated that countries with organized and upgraded Wholesale Food Market infrastructure networks provided higher resilience and a better capacity to deal with disruptions and claimed that investment and support to the modernization and upgrading of wholesale food markets should be a top priority to transform food systems.

“Along with urbanization, food consumption and demand are equally rising. It is therefore crucial to look at our food system infrastructure and its distribution channels” James Tefft

In the general discussion participants suggested that countries with organized and upgraded wholesale market infrastructure networks provided higher resilience and capacity to deal with disruptions. Wholesale markets can ensure this and are therefore key actors in the urbanization trend. In this sense, it is crucial to enhance major investments in the structuration of the food sector and start treating food accessibility/food security as a major mission of every state through articulated food governance policy.

2. Fostering healthy food consumption patterns in the post-Covid-19 world

At the onset of the pandemic in 2019, 25% of the world struggled to eat “safe, nutritious and sufficient food” according to the UN’s State of Food Security and Nutrition in the World report. This type of statistic was at the heart of the second roundtable focusing on ways to foster healthy eating patterns in the world after Covid-19.

This roundtable was chaired by Eugenia Carrara, Secretary General of WUWM and counted with renown speakers, namely Lujain Aldoqmani, Director of Global Action and Senior Advisor to the Executive Chair at the EAT foundation, Christopher Mejia Argeta, Research scientist at the MIT Center for Transportation and Logistics, Alexandra Nikolakopoulou, Head of the Unit “Farm to Fork Strategy” in the food sustainability, international relations directorate, Jean-Paul Auguste, President of the Groupe Géraud and WUWM Retail Market Chairman, and Sean de Cleene, Head of Food Security and Agriculture Initiatives at the World Economic Forum.

According to EAT, if current trends continue global food demand will increase by 50% by 2050, the demand for animal products like meat and milk will more than double. More than 4 billion (45%) people could be overweight, 1.5 billion of them obese (16%) while 500 million people continue to be underweight.

Therefore, all speakers agreed on the importance to change food consumption patterns, boost the demand of healthier products, and to understand behavioural changes in order to effectively drive the food transition towards resilience, food safety and sustainability. It is crucial to empower and motivate consumers everywhere to choose healthy and sustainable food, especially fresh vegetables and fruits.

Dr. Lujain Alqodmani pointed out that there is a need for more widespread availability, awareness and uptake of healthy diets, notably by understanding behavioural changes. The major question is how to motivate consumers to change their eating habits? For creating

such environment, Dr Alqodami stated that we should focus on 2 areas: (i) a healthy food environment (that entails policy measures, and actions along the value chain such as school meals and promotion of shops/markets selling fresh produce); and (ii) food markets access to empower SMEs and farmers. In addition to that, it is important to work on consumers' perception of healthy and sustainable diets through education, product reformulation and innovation and improve average knowledge and create intrinsic motives through experiences.

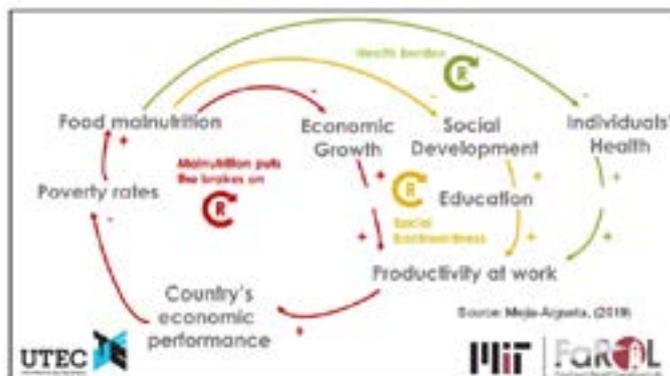
“Countries with a high amount of street fresh food markets were citizens can have easy access to fresh food at convenient prices are crucial to foster healthier diets”

Jean-Paul Auguste

Dr. Chris Meija Argueta, Research scientist at the MIT Center for Transportation and Logistics, converged on this point but added that we first have to identify the entry points and dynamisms to adequately address targeted issues. The most important challenge is related to supply chain management and logistics, and then to accessibility, affordability of healthy food and awareness of citizens on the benefits of healthy diets. In this sense, Dr Meija argues that wholesale markets can provide access to ensure availability and quality in the long term and play a major bridging role among all the fresh food stakeholders. In the future, they could also be key actors supporting short supply chains and to promote locally seasonal products.

Alexandra Nikolakopoulou, Unit Director at the European Commission presented the Farm to Fork strategy, adopted by the European Commission right after the pandemic, in the frame of the Green Deal which is the new sustainability agenda of the European Union (EU). The sustainability of food systems is at the heart of the Green Deal, she stated. Making the healthy and sustainable choice for consumer is one of the key objectives of the this Strategy. The situation is worrying in the EU

as the consumption is not aligned with the targets, as European intake of fruits and vegetables remain lower than the WHO recommendations in most countries. Diets are in this sense not only an issue of individual choices, but they are related with education, information and marketing.



Ms. Nikolakopoulou also presented the Code of Conduct for Responsible Business that the European Commission launched in partnership with European major food stakeholders. This Code was led by the private sector and NGOs and supervised by the European Commission. This first-of-a-kind innovative and collaborative approach aims to put all the actors together to draw an engaged pathway towards EU objectives to help citizens make the “healthier choices easier” in regard to food consumption. The Code will be presented at the UNFSS as a game-changing solution and an inclusive collaboration process among all stakeholders to reach the SDG.

Jean-Paul Auguste, Director of retail markets at WUWM, placed an emphasis on the core role that wholesale, retail and small fresh food shops play for providing a wide variety of fresh products to promote healthy diets to all on a daily basis. Indeed, there is an interconnection between these layers as wholesale markets are the only ones that can provide today a large array of fresh products in a regular basis and in right quantities to cities. Countries with a high amount of street fresh food markets were citizens can have easy access to fresh food at convenient prices are crucial to foster healthier diets. Events like WUWMs Love Your Local Market (LYLM), an annual campaign were for 2 weeks different animations are undertaken in almost 20.000 street markets all over Europe, have the potential to bring more people to the fresh food markets fostering healthier food consumption patterns. Mr Auguste closed by supporting the need need to have a clear language/guidlines to help local governments implement the right urban planning policies and the right pedagogy with schools and with social services.

Finally, Sean de Cleene brought forward the importance of revisiting food systems. To succeed, he pointed out the urgent necessity of building collaboration and integrating all agri-food stakeholders to move towards inclusiveness and sustainability. He mentioned the 2021 UNFSS as a unique opportunity to do so as it takes into account the entire food system. Mr de Cleene pointed out that today we need to evolve from a silo approach based in individuals' institutions initiatives towards a systemic and synergic approach, where multiple actors work in concrete projects together. This is going to require a significant shift in terms of approach and will require a quick catch-up in terms of innovation and digital transformation.

3. Fresh food logistics during the pandemic and beyond : strategies to ensure reliability, safety and efficiency

The third roundtable focused on issues of logistics concerning fresh foods, as well as strategies to make sure food is reliable, safe and efficiently distributed. The speakers at this roundtable, that was chaired by Ioannis Triantafyllis, WUWM Vice-chairman, included Luca Lanini, Professor and expert on logistics and supply chains, Benoit Juster, Executive Director of Operations at the Rungis Wholesale Market, José Antonio Larco Martinelli and Claudia Antonini, Professors at the MIT Food and Retail Operation Lab – UTEC, Dr. Jagvir Singh Yadav, Director at COSAMB and Kobenan Kouassi Adjoumani, Minister of Agriculture in Ivory Coast. Together. They stressed the importance of developing consistent food policies and taking care of adequate infrastructure and logistics.

Speakers stressed the importance to develop consistent food policies, taking care of adequate infrastructure and logistics, that could ensure sustainability and the provision cities in a highly urbanized world.

This panel was opened by Professor Luca Lanini who stressed the importance of full loads logistics to ensure

sustainability and the provision of urbanizing cities. Another important aspect of making logistics more sustainable is developing logistics platforms, bringing together markets, cold chain, logisticians, and more stakeholders. To further improve and increase efficiency of fresh food logistics, Dr. Lanini mentioned the importance of innovations on the areas of digitalization and transparency as they will provide huge advantages in ensuring reliability, safety and efficiency. Dr. Lanini also highlighted that multimodal systems of delivery (road, train, maritime..) will be key for the future in which all different modes of transport and stakeholders are connected.

Benoit Juster from Rungis Market in France and Dr. Yadav from COSAMB in India highlighted the challenges of wholesale markets in regards of logistics during the pandemic. Covid aggregated problems of logistics between farmers, wholesale markets, and their clients, and created imbalances of supply and demand, employment imbalances, and more food loss along the food supply chain.

Dr Yadav pointed out that the role of wholesale markets is unique in India, as they have 7000 wholesale markets in the country acting as an aggregating place for smallholder farmers.

“It is essential to improve the connection between farmers and markets”
Dr. Martinelli and Dr. Antonini

A specific market example of innovative strategies to ensure reliability, safety, and efficiency in regard to logistics during the Covid outbreak was provided by Mr. Juster: Rungis developed a digital delivery service in



in which the market partnered with the smart-logistic start-up Califrais to deliver from the market directly to the citizens homes fresh food using an online platform. This enabled the market operators to find new ways of putting their produce into their market, so to pursue their operations, as well as ensuring that citizens will have access to fresh produce while the street markets were close – due to government measures to limit Covid propagation- . Mr Juster stated that “even if this was a temporary solution it was very useful in order to develop new stages of our digital marketplace”.



Mr. Juster also mentioned that this startup was born at Rungis Incubator, showing the importance for the sector to count with onsite incubators and provide seed-investments to create start-ups within wholesale markets. He stressed that other countries should consider to open on-site incubators in order to find local innovative solutions to pressing problems, and that this kind of infrastructure could be also financed by local, national or international funds.

Two scholars from the Massachusetts Institute of Technology (MIT) Food and Retail Operations Lab – UTEC, Dr. José A. Larco Martinelli & Dr. Claudia Antonini identified further problems and solutions that occurred in food logistics during the pandemic. They identified problems with inbound logistics such as congestion and food loss in handling. Actions that could help face those problems included the implementation of time slots, and the queuing of orders.

Dr. Martinelli and Dr. Antonini also identified that even more farmers went to the cities to sell their produce due to the disruptions in logistics. This was not the most efficient and sustainable approach for the food system as the time they spend selling they did not spend on the farm. They identified that it is essential to improve the connection between farmers and markets so that situations like this can be avoided or addressed properly. Wholesale markets have a key role in this as they can and are reaching out to smallholder farmers to ensure local supplies. Dr. Martinelli and Dr. Antonini

further mentioned that research shows that investment in logistic infrastructures and cold storage can ensure less food waste, perishability, and cross-contamination.

Finally, the Minister of Agriculture of Ivory Coast, Kobenan Kouassi Adjoumani, highlighted that around 40% of Ivory Coast’s agricultural production does not get to their markets due to problems in storing, logistics, and infrastructures. A new approach in his country will ensure that markets are better connected to agri-food networks so that all can benefit from best practices and common solutions. Also, they are devoted to apply part of the funding they receive from the World Bank in improving infrastructures of wholesale markets so they become more resilient, sustainable, and able to supply the growing population with fresh food.

“Multimodal systems of delivery (road, train, maritime..) will be key for the future in which all different modes of transport and stakeholders are connected”
Dr. Lanini

4. Innovating for resilience in the food supply chain

The fourth and final roundtable of the Conference focused on resilience in the food supply chain and ways to improve it. The Director of Milano Market, Cesare Ferrero chaired Roundtable4. Five speakers intervened during it, namely Masami Takeuchi, Food Safety Officer at the FAO, Gonzalo Bravo Baltra, Direc-

tor and General Manager of the Lo Valledor wholesale market in Chile, Richard Prenzel Valenzuela, Commercial Director of the Lo Valledor wholesale market, Pauline Jacquemard, Director of the Corporate Social Responsibility unit at the Rungis wholesale market and Altivo Almeida Cunha, Consultant for the FAO. They discussed the emergence of innovations and new approaches to food system practices, but deplored the lack of data, information and funds to further help enhance innovation.

The participants agreed that new innovations and approaches to food system practices are reconfiguring food systems so that they are better equipped to deliver healthy and accessible diets to all people. Emerging innovations to produce, govern, process, and distribute food demonstrate a great potential to lead the transition towards a more resilient and sustainable food system. Nevertheless, there is a lack of information and funds to create reliable data in the food sector that could be crucial to enhance innovation.

Actors agreed on the potential of digital tools that can make complete food traceability possible, drastically improve logistics and make trading easier. Solutions related to smart logistics can reduce distribution routes and decrease pollution. They stressed the necessity of acknowledging possible disparities in terms of accessibility and availability of these technologies in the various countries and food systems around the globe, and therefore the need for international funds to avoid leaving poor countries behind. Participants also noted that innovations play a crucial role in the modernization of wholesale markets and their resilience to absorb shocks.



Masami Takeuchi, FAO Food Safety Officer, emphasized that innovation is not necessarily extremely complicated or costly and can lie on simple but concrete food safety and biosecurity measures to be put in place. Relevant technology and innovation would then be supportive to this. FAO and WUWM are currently doing a joint project on food safety in Asia and LATAM and

among recommendations, there are the need to have guidelines on food safety practices (though regulation and delegation), and raising public awareness and reliable information - traceability is the weak point in most markets.

“The incubator supports new projects to help them get their businesses off the ground in the best possible conditions and in interaction with the day-to-day activities and companies of the wholesale market”
Pauline Jacquemard

Game-changing innovations that can support the fresh food sector include blockchain utilities, as it has the potential of recording every step of a food's journey through the supply chain-. Among others, participants discussed the use of blockchain for virtual labelling to ensure traceability (can help people to know how long their food has been going around and how it has been handled), and Whole Genome Sequencing-detection (helps rapid detection of harmful pathogens) and smart contracts for fairer/more transparent distribution and selling prices of fresh produce.

Pauline Jacquemard from Rungis Market in France presented the Rungis market incubator. Rungis & Co was created in 2015 and has since incubated over 90 start-ups, providing a response to the issues associated with food trade and distribution and supporting the food transition. The incubator supports and hosts project leaders and entrepreneurs starting new businesses to help them get their businesses off the ground in the best possible conditions and in interaction with the day-to-day activities and companies of the wholesale market.

Rungis & Co supports professionals in the food supply chain in sectors as the supply, upstream and downstream logistics, ecological transformation of the value chain, including packaging and digitalization (transparency, traceability, invoicing, etc. and food transition. The incubator has already several success stories that became “game-changers” for the Market.

Gonzalo Bravo Baltra presented two innovative projects that Lo Valledor Market (Chile) has been working on to reduce food waste “Fundación Banco de Alimentos Lo Valledor” and “Programa compostaje”. The first one was launched in 2015 and consists of redistributing food to vulnerable communities, while the second project was launched in 2018 and is promoting circular-economy and the re-use of unconsumed food to animal feed or for compost. The market objective is to become a zero-waste market by 2030, and drastically reduce its carbon-footprint. Today the market recycles and upcycles almost 40% of the left-produce.

“Lo Valledor (Chile) market objective is to become a zero-waste market by 2030, and drastically reduce its carbon-footprint. Today the market recycles and upcycles almost 40% of the left-produce” CEO Gonzalo Bravo

Altivo Almeida Cunha from FAO, pointed out that modernising wholesale markets is crucial as it will bolster resilience of the food value chain to absorb shocks. After the pandemic, our markets have responded promptly. They have started using digital e-platforms. The markets have been very swift in responding and adjusting. Many regions within the countries maintain market information systems. They record the commercial activities of wholesale markets. These systems are important in guaranteeing traceability and transparency.

Unfortunately, due to the high rate of informality of commercial transactions in Latin America, investments in the digital economy are difficult to be made. In order to make wholesale markets more efficient, food value chains should be more territorially integrated. The modernisation of cold rooms, training of staff to develop new administrative and operation functions, better information and transparency are for Mr Cunha among the major challenges for the LATAM region.



Speakers agreed that whilst some wholesale markets can develop these kinds of tools in some regions of the world this should be enabled by the government or international funds. A global incubator for wholesale markets and fresh food distribution/availability could be also a solution. Moreover, sharing expertise, education and raising awareness activities and having innovative ideas, streaming through different countries is key.

UN-HABITAT WUWM MOU signature

UN-Habitat joined forces with WUWM through the signature of a Memorandum of Understanding during the Conference in Florence. In the context of achieving the UN Sustainable Development Goals (SDG) and the New Urban Agenda, this partnership will improve urban-rural linkages for resilient, inclusive and sustainable territorial food systems, as key component of sustainable cities.

Our new partner organization, UN-Habitat, is the UN Agency that supports more inclusive, resilient, safe and sustainable cities and human settlements globally. Their vision is to build “a better quality of life for all in an urbanized world”. They work in over 90 countries and promote transformative change in cities and human settlements through knowledge, policy advice, technical assistance and collaborative action. Markets and food systems are aligned with and supported by various areas of work of UN-Habitat, and especially wholesale markets.

This Memorandum was signed by Ms. Maimunah Mohd Sharif, the Executive Director of the United Nations Settlements Program (UN-Habitat), and Mr. Stéphane Layani, Acting Chairman of the World Union of Wholesale Markets (WUWM).



Annexe

Programme of the plenaries, roundtables and speakers of the Conference :

Healthy Diets for the Planet: Challenges and pathways to ensure sustainable food systems worldwide

- Mr. Martin Frick (United Nations Food System Summit Secretariat)
- Mr. Stéphane Layani (Chairman of the World Union of Wholesale Markets (WUWM), Mr. Fabio Massimo Pallottini (Chairman of Italmercati)
- Mr. Qu Dongyu (General Director of FAO).

The future of food in the post-covid-19 world

- Mr. Lawrence Haddad (Executive Director at the Global Alliance for Improved Nutrition (GAIN))
- Mr. Ma Zengjun (President of China Agriculture Wholesale Association (CAWA))
- Mr. Jamie Morrison (Director, Food Systems and Food Safety Division at FAO)
- Pr. Andre Segrè (Professor of International Agricultural Policy, Italian Ministry of Foreign Affairs) and
- Ms. Carolyn Steel (Author of Sitopia, How can food save the world?)

Tackling the challenges of Covid-19:

Lessons learned and opportunities to improve sustainability in the food system

- Mr. Jordi Valls (Mercabarna, Spain)
- Mr. Arturo Fernandez (WUWM Chairman of the Americas Region and President of FLAMA)
- Ms. Dolores Roman Gallego (Mercamadrid, Spain)
- Mr. James Tefft (FAO Investment Unit).

Fostering healthy food consumption patterns in the post-Covid-19 world

- Ms. Eugenia Carrara (Secretary General of WUWM),
- Dr. Lujain Aldqodmani (Director of Global Action EAT)
- Mr. Jean-Paul Auguste (Director of Retail Markets WUWM, President of Groupe Geraud, France)
- Mr. Sean Decléene (World Economic Forum)
- Mr. Chris Meija Argueta (Massachusetts Institute of Technology (MIT))
- Ms. Alexandra Nikolakopoulou (Head of Unit "Farm to Fork", European Commission).

Fresh food logistics during the pandemic and beyond: strategies to ensure reliability, safety and efficiency

- Mr Ioannis Triantafyllis (WUWM Vice Chairman, General Manager of Central Markets and Fisheries, Greece)
- Mr. Kobenan Kouassi Adjoumani (Minister of Agriculture of Ivory Coast)
- Dr. Claudia Antonini (Massachusetts Institute of Technology (MIT) Food and Retail Operations Lab – UTEC)
- Mr. Benoit Juster (Rungis Market, France)
- Dr. Luca Lanini (Catholic University of Rome, Italy)
- Dr. José A.Larco Martinelli (Massachusetts Institute of Technology (MIT) Food and Retail Operations Lab – UTEC)
- Dr. Jagvir Singh Yadav (COSAMB, India).

Innovating for resilience in the food supply chain

- Mr. Cesare Ferrero (Director of Milano Wholesale Market)
- Mr. Altivo Almeida Cunha (FAO Latin America)
- Mr. Gonzalo Bravo (Lo Valledor Market, Chile)
- Ms. Pauline Jacquemard (Rungis Market, France)
- Ms. Masami Takeuchi (FAO Rome).



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