



Food and Agriculture  
Organization of the  
United Nations



FUTURE  
FOOD  
INSTITUTE

# 24-HOUR GLOBAL MARATHON FOR SUSTAINABILITY FOOD FOR EARTH



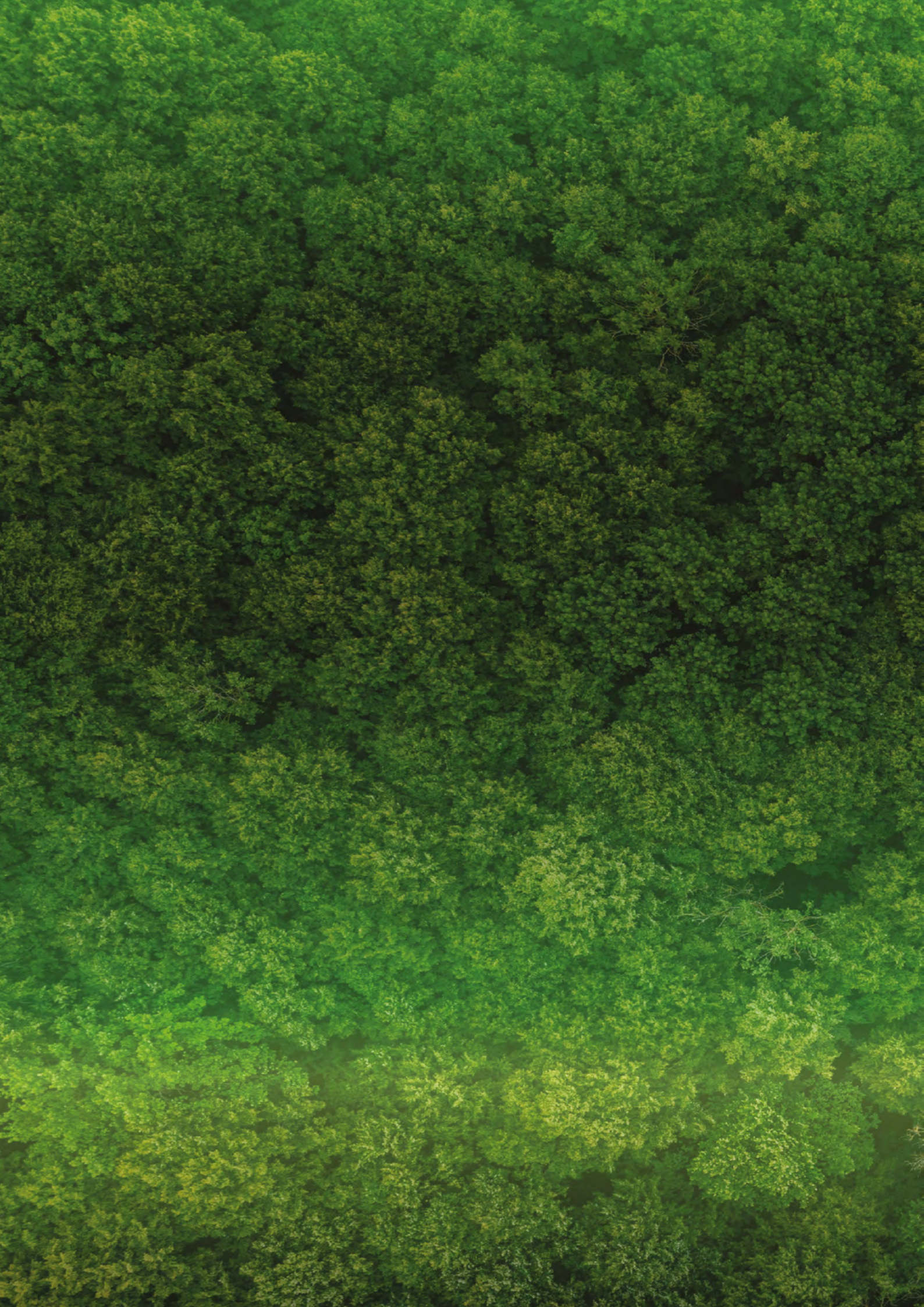
*TO CELEBRATE UNITED NATIONS INTERNATIONAL MOTHER EARTH DAY*

## 2020



FAO elearning  
ACADEMY







# 24-HOUR GLOBAL MARATHON FOR SUSTAINABILITY FOOD FOR EARTH



*TO CELEBRATE UNITED NATIONS INTERNATIONAL MOTHER EARTH DAY*

# 2020

Jointly developed by  
the Future Food Institute (FFI)  
and  
the Food and Agriculture Organization of the United Nations (FAO)  
Rome, 2021



FAO and FFI. 2021.

*24-hour Global Marathon for Sustainability – Food for Earth.*

Rome. <https://doi.org/10.4060/cb5015en>

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Thus begins our journey



The full **marathon recording**  
of all sessions in the **24 hours**

**Food for Earth Day – [futurefood.academy/earthday](https://futurefood.academy/earthday)**

**RECOMMENDED APP**

QRdroid for Android

Scan for iOS



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The coronavirus disease (COVID-19) pandemic and the measures that were implemented to address it compelled people around the world to give serious thought to the meaning of sustainability and its importance for the planet and our common future.

The 2020 24-hour Global Marathon for Sustainability, organized by the Future Food Institute (FFI) and the Food and Agriculture Organization of the United Nations (FAO), provided a golden opportunity to delve into all the different angles of sustainability through the voices of more than 100 speakers from around the world.

They represented civil society, academia, research institutions, the private sector, farmers, entrepreneurs, indigenous peoples, journalists, young leaders, chefs, the United Nations and more.

The number of viewers over the 24 hours of the marathon – more than 100 000 – is a clear demonstration of the topics' relevance. Many people around the world are concerned about the future of the planet and are looking to deepen their knowledge.

The myriad topics covered by the marathon attest to the complexity of the relations between sustainability and food systems, among others, and the need to address them through a multidisciplinary approach and a multi-stakeholder perspective.

The 24-hour global marathon will become a reference point for future initiatives. The lessons learned around planet, people and prosperity will guide policies and programmes that will effectively contribute to a world that is more sustainable, resilient and cohesive.

**Marcela Villarreal**

Director of Partnerships and United  
Nations Collaboration Division, FAO

*Marcela Villarreal*





Taking place in the middle of a worldwide pandemic, Mother Earth Day 2020 was not as we expected. The crisis humanity has been called to face is global, disregarding culture, time zones and geography. Our planet is sending us an important message, one that is growing louder each year and that we, as humans, can no longer ignore. With this objective in mind, FFI and FAO are reaching out to the global community to engage, share, collaborate and concretely face the urgent call for us all to move beyond “business as usual.”

Food plays a crucial role in local communities, meaning that food is care, family, culture, tradition, rituals, language, energy for life and life itself. The COVID-19 pandemic has shown us how essential and fragile the food and agriculture sectors are and why they need to be reshaped. We can transform food systems through analysing current dysfunctions and identifying the seeds of goodness. More than ever, international task forces are needed so that we can reconnect with the potential for a brighter future.

Conscious of the role we are called to play, FFI and FAO organized the Food for Earth 24-hour global digital marathon to celebrate the 50th anniversary of Earth Day. We brought together bright minds to speak on best practices and innovative solutions for sustainable food systems that can regenerate the planet.

Like an Olympic torch, this relay of positivity and goodness traveled from east to west, involved more than 100 voices and passed from indigenous people – who reflect the identity of entire territories – to entrepreneurs, scientists, journalists, young leaders, policymakers and farmers. The torch passed from China to Japan, India, the Middle East, Europe, Africa, Latin America, North America, and even to the North and South Poles. It was the largest lesson on the regenerative power of food systems.

This groundbreaking event was based on FFI’s five pillars approach: **food diplomacy**, **circular living**, **climate-smart ecosystems**, **food identity** and **prosperity**. Through it, FFI and the FAO eLearning Academy aim to connect and weave together the United Nations Sustainable Development Goals (SDGs) through the integral power of food.

While we were all experiencing various degrees of lockdown due to the pandemic, our 24-hour digital marathon became a way to bring the world into our homes. This knowledge-sharing experience, fully aligned with the UN SDG framework, is human-and nature-centred, and reflects the shift from design-thinking to prosperity-thinking by placing nature back at the centre of our lives. It envisions new systemic approaches and employs multi-stakeholder platforms and multidisciplinary profiles.

Food for Earth Day 2020 was the largest lesson on **feeding a future, a feat in teaching us how to change for the better**. This booklet contains the legacy of this valuable and unprecedented learning experience, collating the inspiring and insightful contributions that were made session by session, speaker by speaker, country by country, in the name of building a new, sustainable and brighter future together.

**Cristina Petracchi**

Leader of the FAO eLearning Academy

*Cristina Petracchi*

**Sara Roversi**

Founder of Future Food Institute

*Sara Roversi*



# Food for Earth: the Future Food Institute's open-source regeneration toolbox

Widespread consumerism and massive extraction are just a few of the causes of our currently unsustainable system of production and consumption. Grounded on the false assumption that natural resources are infinite commodities at our disposal – to be used carelessly according to a linear approach (take-make-dispose) – a business-as-usual attitude has resulted in serious depletions of the planet's resources.

In particular, the whole agri-food system (agriculture and land use, storage, transport, packaging, processing, retail and consumption) is one of the biggest contributors to greenhouse gas emissions – 25-30 percent, according to the UN **Intergovernmental Panel on Climate Change (IPCC)**.\*

Agriculture alone is a major sector responsible for freshwater overconsumption (70 percent of freshwater is used for agriculture), deforestation and soil degradation. To reverse the current patterns and heal the dysfunctions that have become all too clear in 2020's three concurrent crises – climate, health and food – the food industry can and must play a pivotal role.

In this scenario, where the global nature of these challenges requires us to move beyond any cultural boundaries or geographical areas, food and agriculture are once again recognized as essential for human life, not only in emerging countries but also in Western countries. Only by reshaping the agri-food system for the better is it possible to regenerate the planet instead of depleting it, strengthening the bonds within communities and enabling multi-stakeholder collaboration and global prosperity. Because food is also a vehicle of values, it can empower inclusion, brotherhood, sociality and care.

Through food, we can improve energy and nourishment. Given these multifaceted values and potential, the FFI has developed the Food for Earth Regeneration Toolbox, an open source tool to model the climate crisis, starting with the healing power of food. Considering the interconnections generated by food and through food – including outside the strict circle of the food system – the Food for Earth Toolbox bridges food producers, distributors and consumers with the rest of the global community. The toolbox targets policymakers, food authorities, food managers, local governments, urban planners, scholars, youth, cooks, startups and businesspeople to help them restore the balance between man-environment-culture-health. In this way, the 17 SDGs can be implemented as they directly or indirectly relate to food and agriculture.

The Food for Earth Toolbox is composed of five areas of innovation, particularly areas where an approach that is prosperity-driven and life-centred are most needed to support long-lasting innovation and generate a positive impact.

\* IPCC, 2019: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems [P.R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H.-O. Pörtner, D. C. Roberts, P. Zhai, R. Slade, S. Connors, R. van Diemen, M. Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, J. Malley, (eds.)]. In press.

In this area, food is considered in reference to national and interstate relations, as is any diplomatic practice. Food can be turned into a means of exerting influence, but also communicating one's culture and identity. Food diplomacy is a key discipline in the management of access to safe food and water. It also impacts the effects of environmental disasters on agriculture, which is a cause for an increasing number of climate migrants.



In this area, food is considered within the domestic dimension. Circular living is aimed at eliminating waste (food waste, water waste, soil depletion/erosion) through regenerative food practices and continuous resource management. By focusing on increasing efficiency, waste outputs are converted into useful inputs, minimizing resource loss.



In this area, food is considered in reference to the natural environment. A smart approach to climate facilitates adaptation and mitigation strategies, moving from intensive agricultural practices to practices that have less impact on the environment. With the help of technologies, it is possible to improve realities and geographical areas hit by environmental distress, allowing them to be self-sufficient and produce their own food.



In this area, food is examined through community. Food traditions and the cultural aspects and rituals of food are an essential component to planet regeneration, the social regeneration that passes through food identities. Food identities provide a representation of the richness and cultural diversity that exists in a city's food and social landscape. Food landscapes are defined as physical, organizational and sociocultural spaces in which residents encounter food and food-related issues. The interaction of different food identities determines the overall culture of the places where *humana communitas* reside.



In this area, food is considered within the economic scenario. Prosperity is going beyond just financial prosperity but includes critical elements including emotional, physical, mental and cultural prosperity. Our understanding of prosperity must change and develop to include all its facets and encourage responsible, collective and participatory decisions to prosper together. This new, integrated approach to prosperity also leads to rethinking the indicators and generators of well-being that analyse how food and nutrition generate prosperity.

The great challenge of our era is to succeed in protecting our planet, feeding humans in a healthy way and taking care of the ecosystem that is hosting us. Through enabling platforms, new organizational models, and new indicators and data, it is possible to raise a collective voice on the importance of sustainable food systems, endorsing behavioural change that is widespread, multilevel and multisectoral.



# 24-HOUR Digital Global Marathon for Sustainability

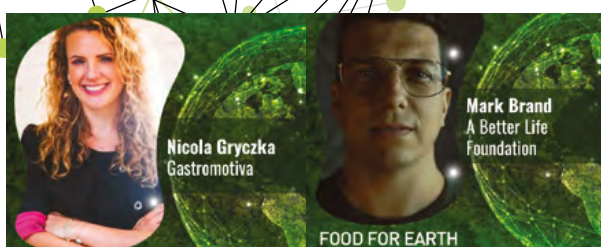


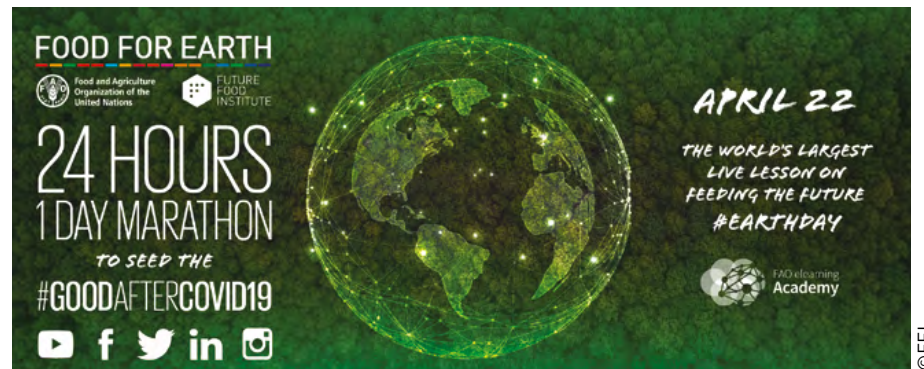
[www.fao.org/partnerships/news-archive/news-article/en/c/1275133/](http://www.fao.org/partnerships/news-archive/news-article/en/c/1275133/)

Together with FFI, FAO's elearning Academy marked the 50th anniversary of Earth Day with a 24-hour multilingual digital global marathon on sustainability. Entitled "Food for Earth," the event brought together a diverse group of experts for a discussion on how sustainable food systems can play a transformative role in the way we live, and the impact we have on the planet.

The event featured multilingual work sessions spread out across the globe, all focused on the regenerative power of food systems. The online discussions moved from east to west, with the first sessions held in China, Japan and India, before moving on to the Middle East, Russian Federation, Europe, Africa and the Americas. Participants even had a chance to connect with Antarctica during one of the sessions, when scientists based at Concordia Research Station on the Antarctic Plateau joined in.

The event featured participants from a number of backgrounds, providing diverse perspectives on how the transformation of food systems can play an important role in the health of the planet. **Indigenous peoples, entrepreneurs, scientists, journalists, young leaders, policymakers and farmers** all contributed. The event brought together more than 100 expert voices, who were joined by more than **100 000 viewers** worldwide throughout the day.



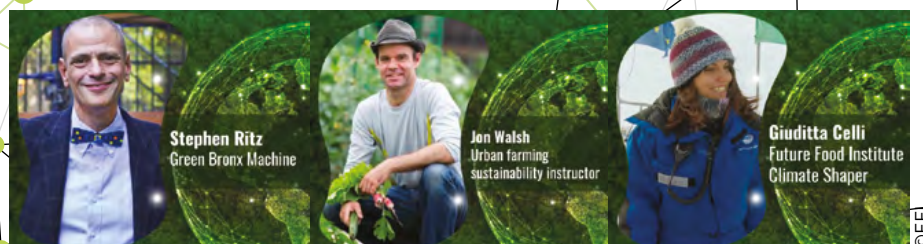


The lessons learned during the global marathon can be grouped into three topics: planet, people and prosperity.

From the **“planet,”** or environmental perspective, participants agreed that in order for food systems to be more sustainable, we must focus on safeguarding natural resources, especially water; place farmers at the centre of our relationship with food, as guardians of the land; embrace circularity; and reduce food waste. Additionally, we should work to limit climate change and biodiversity loss, as the impacts of both can make us more vulnerable to disease and food insecurity.

The **“people,”** or human perspective, identified lessons related to cooking and food experiences, and underlined the role of food as a medicine as well as a central part of identity, tradition and culture. The sessions also looked at the connection between food and education, and the potential of the kitchen to serve as a classroom and as a place that can help to foster peace.

Finally, in the **“prosperity”** category, key learnings included the importance of integrating “core values” in innovation, such as reciprocity, active listening, solidarity, empathy and collaborative leadership. The sessions focused on how to develop a holistic approach to solve global challenges, one that takes into account a shared environment and promotes a One Health method. This approach recognizes the connection between humans, animals, plants and their shared environments, in an integrated effort to reduce disease and other threats and ensure safe food supply. In the context of the current pandemic, discussions also focused on the necessity to care for one another.





# SUCCESS FACTORS FOR MARATHONS

A digital marathon is an extremely powerful advocacy, awareness-raising and capacity-development tool. It is advisable to organize one when you wish to reach a wide audience and convey an important message on humanity's global challenges.

## MARATHON RICHNESS AND QUALITY

### → Select the most relevant speakers

Use your networks of partner institutions and constituencies to select the most relevant speakers. They should be able to share experiences, good practices, issues, concerns and lessons learned, and propose innovative solutions and models for the local challenges they are facing in their countries.

### → Multidisciplinary and multi-stakeholder approach

In order to contribute to the quality, relevance and richness of the marathon, we advise inviting participants from a number of different backgrounds and expertise, therefore providing diverse perspectives.

In addition to the different disciplines and technical backgrounds, it is important to adopt a multi-stakeholder approach. Invite representatives from indigenous groups, entrepreneurs, scientists, journalists, young leaders, policymakers, civil society representatives and farmers to give each the opportunity to interact, exchange views and experiences, and learn from each other.

Combining development, research and innovation perspectives, through the participation of the different stakeholders, provides a holistic and comprehensive view of current trends within the theme of the marathon and contributes to the quality and richness of the interventions.

### → Relevance of the "overall purpose"

When the theme is of great interest and related to global challenges humanity is facing, and the cause or overall purpose is good (i.e. sustainability), participants and share their experiences.

### → Multilingual sessions and promotional materials

As language can be a barrier to learning and communicating, in order to increase interest and favour global participation, it is crucial to organize multilingual sessions that involve facilitators and speakers who speak the selected language. In addition, targeted multilingual promotional activities and communication channels, including marathon announcements, should be considered. They should involve key champions and partners that will contribute to raising awareness of the marathon in their country or region.

## MARATHON LOGISTICS AND ORGANIZATIONAL TIPS

### → Get a Zoom account up and running

Visit the Zoom website to create your account and download Zoom for free. You can download Zoom to your desktop or install the app on your smartphone. However, for the organization of a marathon, we recommend using your computer versus your phone to ensure the highest degree of stability and connectivity.

### → Organize the 24-hour marathon agenda and manage time efficiently

The agenda needs to be carefully curated to accommodate all speakers and content. The 24 hours should be subdivided into sessions. For each session, based on the speakers and interest raised, determine the number of participants and the preferred format for the delivery. Allow for flexibility in contribution. It can be a speech, a facilitated debate among participants with a questions and answers timeslot, a “fishbowl” conversation or a series of presentations to be delivered by speakers. Contact the various speakers and make sure of their availability for the specific marathon date and assigned time slot, taking into account the different time zones and making sure there are no gaps in the 24 hours. In order to respect the schedule over the entire 24 hours, it is extremely important to avoid accessibility/technical issues, or delays. Hence, before the marathon, a test of the platform accessibility and quality of the video and sound needs to be organized for the participants of each session. During the test, a brief live tutorial on the functionality of the platform can be organized, as well as additional test sessions, if needed.

### → Facilitated sessions

In order to avoid delays and make sure speakers respect the timeslot allocated to them, it is important to appoint a facilitator for each marathon session. If the marathon sessions are conducted in different languages, make sure to assign facilitators with mastery of the session language. The role of the facilitator is to:

- 1) make sure the session is on track;
- 2) favour balanced exchanges;
- 3) make sure participants can share their perspective and voice their opinions and views; and
- 4) wrap-up the discussions five minutes prior to the start of the next scheduled session, in order to ensure a smooth transition. The presence of session facilitators has proven to be extremely useful and is recommended for 24-hour marathons.

### → Creating a “green room”

We recommend setting up a green room, where one of the organizers is at the disposal of participants throughout the 24 hours to:

- 1) provide technical support;
- 2) organize an additional test of platform accessibility and quality of the video and sound with other participants, if needed; and
- 3) ensure a smooth process before going live.

### → Ensuring a smooth transition between sessions

It is important to request that participants join the marathon (by clicking on the session link provided by organizers) five minutes before a scheduled session. In that five minutes, make sure participants' cameras are off and microphones are muted when joining. When the session starts, the facilitator will activate participants' devices and they will appear on the live stream. It is important that speakers are prepped to respect the time allocated for them in order to give all speakers a chance to share their experience, and for the overall success of the 24-hour marathon.

### → Interacting during sessions

If a session includes more than four speakers (e.g. fishbowl), ask each participant to turn on their camera and microphone only when they wish to intervene or it is their turn to present, in order to ensure smooth moderation and clear live streaming. Remember to inform speakers on how to share a PowerPoint presentation. In a brief live tutorial on the use of the platform, remember to allocate a minute or two for a quick reminder on how to use certain functionalities of the conferencing platform, such as screen sharing or enabling full-screen mode.

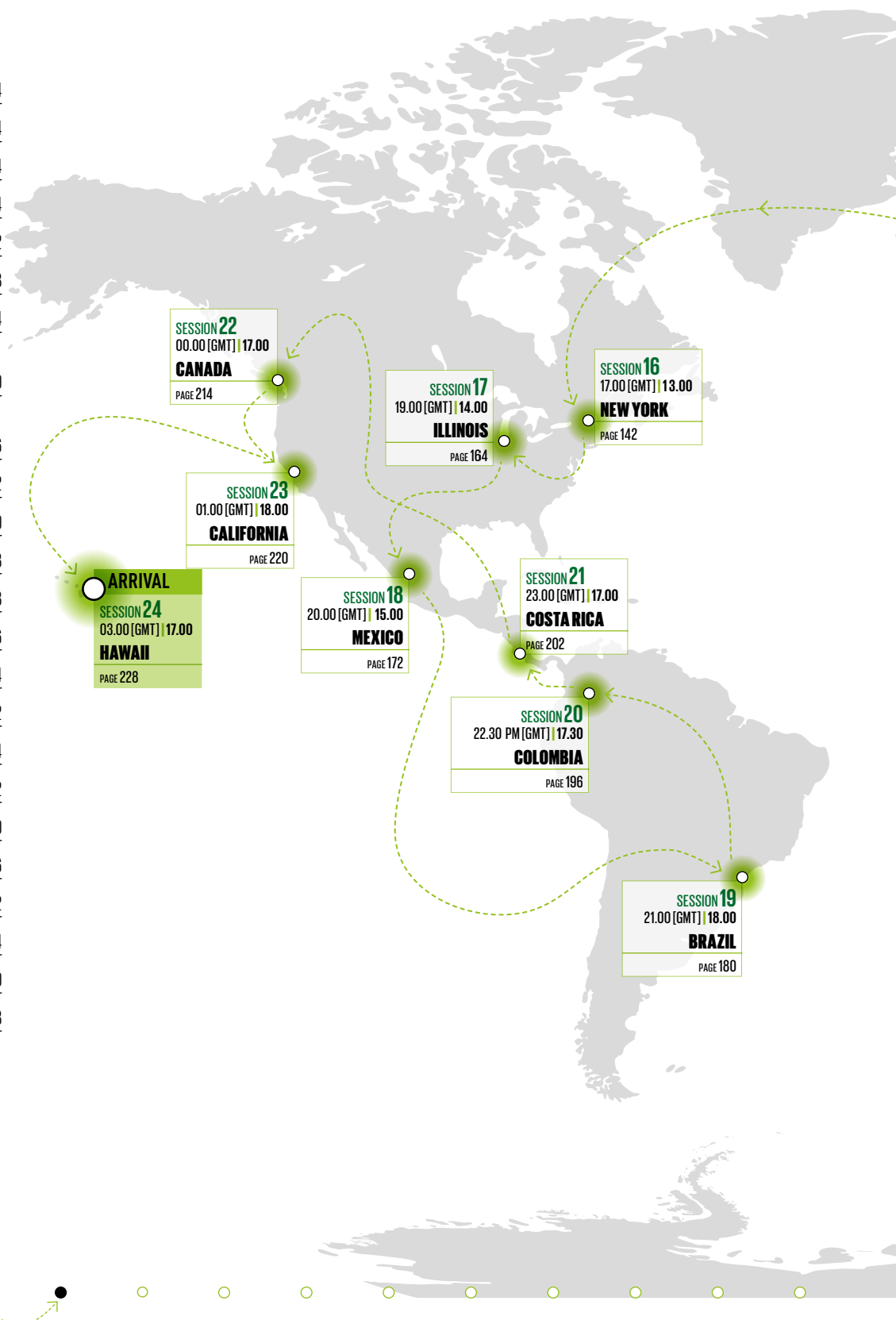
### → Recording the marathon

Be strategic in documenting the event so that anyone interested can have access to the knowledge shared by experts during the marathon. We recommend recording the sessions and editing them, if necessary. Create a unique 24-hour video of the marathon that can then be made available on YouTube.

# INDEX 24 SESSIONS

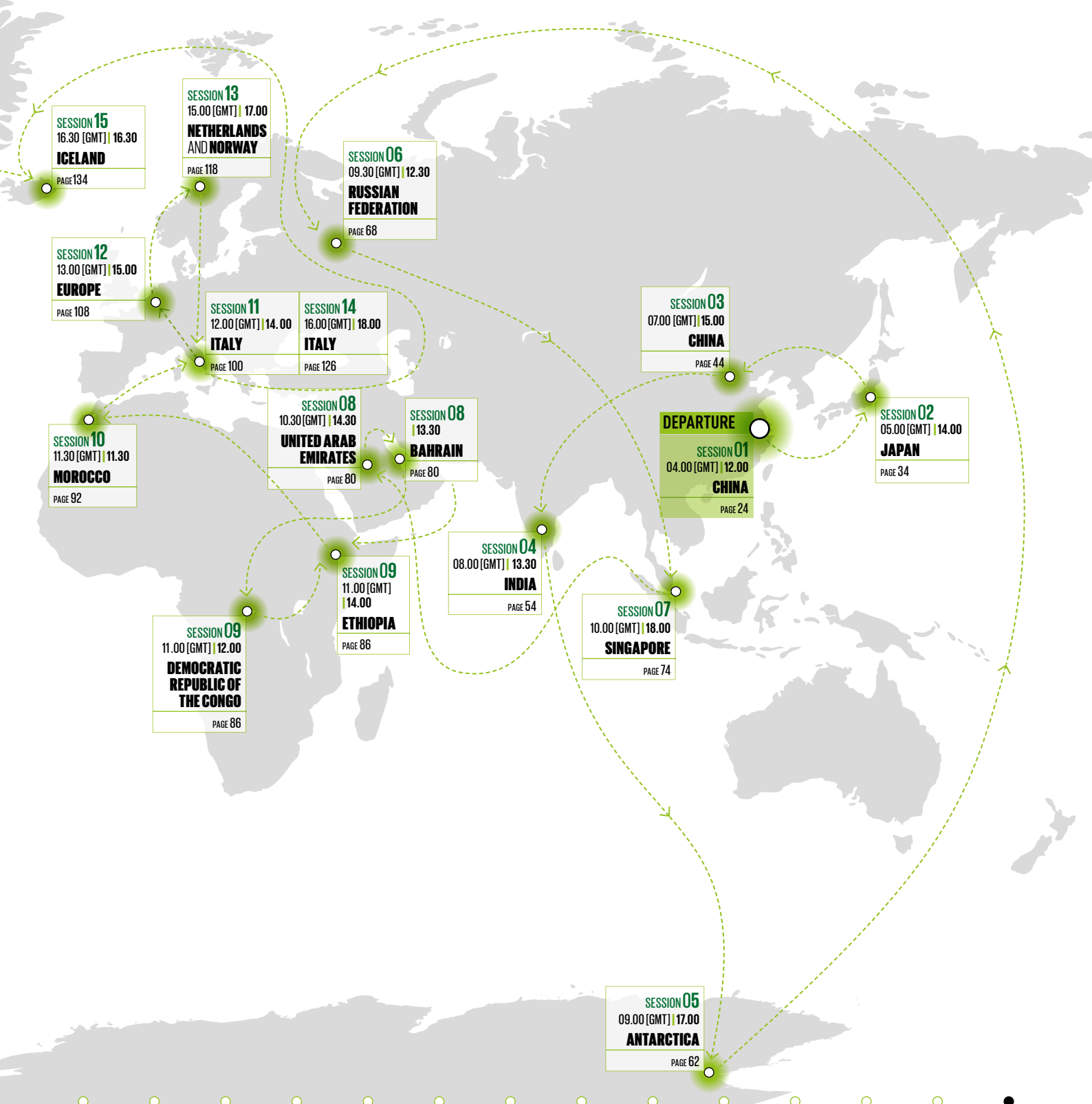
## 24 HOURS

01	CHINA   SHANGHAI	24
02	JAPAN   TOKYO	34
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A successful 24-hour global marathon for sustainability brought together more than 100 expert voices in 24 main work sessions across the world - in English, French, Spanish, Chinese and Italian.

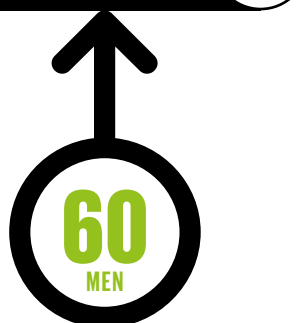
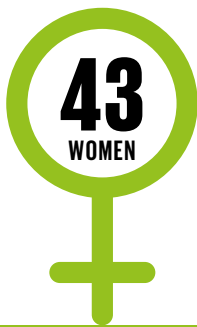


# THE NUMBERS

A groundbreaking event  
for sustainability that  
brought together:

MORE THAN

**30**  
NATIONS



11

ENVIRONMENTAL  
SPECIALISTS

22

ENTREPRENEURS

17

ACADEMICS

中國人

ESPAÑOL

ITALIANO

ENGLISH

FRANÇAIS

24 MAIN WORK SESSIONS, IN  
5 LANGUAGES

10

FOOD INDUSTRY  
MEMBERS

12

FOOD INNOVATORS

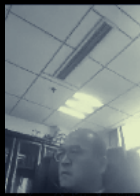
9

CHEFS





Dongxin Feng



Hongmin Dong



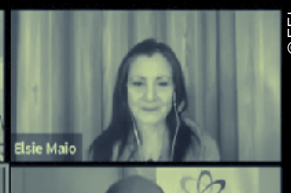
Jonathon Porritt



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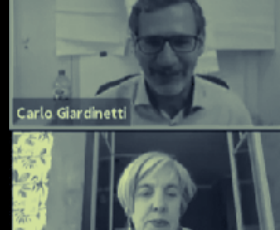
Elsie Malo



Sara Reverdi



Stephen Ritz



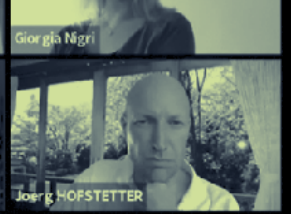
Carlo Giardinetti



John North



Kim Polman



Giorgia Nigri



Andy Middleton



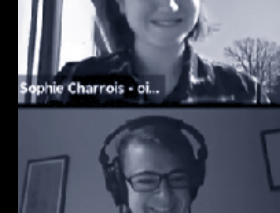
Joerg HOFSTETTER



AZIZ ABOUABCELLAH



Cristina Petracchi



fr Andrea Ciucci



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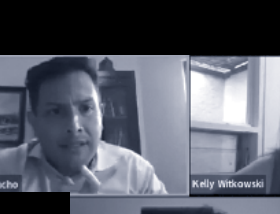
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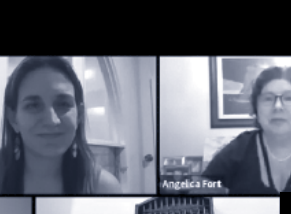
Sophie Charrois - ol.



John Knights



Abby VanMuijen



holly.brittingham



Kaiti Thompson



Kyoko Nagano



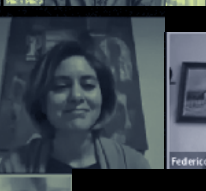
Takanobu Kato



Norihiro Matsuura



Jon Wubb



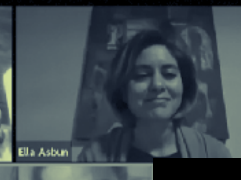
Jia Dalmadi



Rafa Rincon



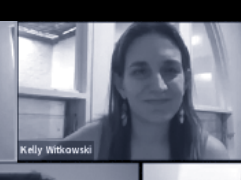
Ella Asbun



Federico Sancho



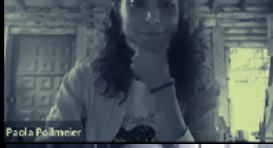
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Angela Fort



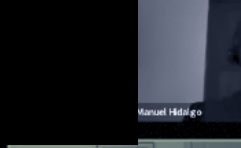
Manuel Hidalgo



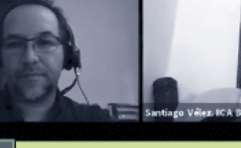
Paola Palmieri



Nicky Gryczka, Social Gast.



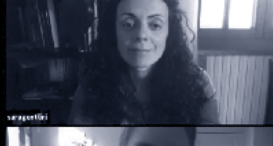
Claudia Larcchia



Andrea Carapellese



Angelo Riccaboni



Sarah Joubert



David Gifford



Claudia Larcchia



Angela Fort



Manuel Hidalgo



Paola Palmieri



Nicky Gryczka, Social Gast.



Claudia Larcchia



Angela Fort



Manuel Hidalgo



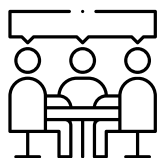


A 24-HOUR GLOBAL EVENT  
TO JOINTLY CELEBRATE  
SUSTAINABILITY AND THE **50th**  
**ANNIVERSARY OF EARTH DAY**  
WITH **OVER 100** AMAZING  
**SPEAKERS** AROUND THE WORLD.



Food for Earth Day - [futurefood.academy/earthday](https://futurefood.academy/earthday)

# MODERATORS 16



extraordinary, inspiring, motivated and passionate moderators, who deeply believe in collaboration for sustainability.

## ● Kerong Wang

FFI

► China is taking great efforts to eliminate the extreme poverty, to fight against the climate change, to protect the biodiversity, to reach the sustainable development. Future Food Institute is honored to join these responsible actions and take part in the innovation & knowledge sharing and the bridging of global cooperation. ◀

○ SESSION 01 | CHINA

○ SESSION 03 | CHINA



## ● Dongxin Feng

Chief, Partnerships and UN Collaboration Division, FAO

► Under the framework of the MoU signed with FAO in 2019, we enjoyed productive cooperation with the Future Food Institute. The 24-hour virtual marathon of hope to mark Earth Day 2020 jointly organized by the FAO elearning Academy and FFI is an excellent example. ◀

○ SESSION 01 | CHINA

○ SESSION 03 | CHINA





## ● Momoko Nakamura

Conservationist and storyteller,  
Rice Girl; author of  
*Plant-based Tokyo*

► *I am a multimedia food consultant, cultural conservationist and storyteller with a mission to share learnings from the Japanese countryside with the world.* ◀

○ SESSION 02 | JAPAN



## ● Chris Krause

Director, Kyobashi Living Lab,  
FFI Japan

► *On the 50th anniversary of Earth Day, with the world in a peculiar state given the COVID-19 pandemic, it was very powerful to connect with members of our community committed to improving food systems in Japan in ways that respect and give back to the planet. It was also impactful to tune in for the other sessions from all around the world and connect with a dynamic group of changemakers working on initiatives that recognize and respect the earth as our only source of food, life and future.* ◀

○ SESSION 02 | JAPAN

## ● Anusha Murthy

Co-founder, Edible Issues

► *Food choice is a privilege. For a stronger and more resilient food system, we need communities that are mindful of each other's choices.* ◀

○ SESSION 04 | INDIA

# MODERATORS

## Claudia Laricchia

Head, Institutional Relations  
and Global Strategic Partnerships, FFI

► *Food is the epicentre of all the SDGs of the Agenda 2030. We cannot speak about sustainable development goals without fixing food system paradoxes. Besides, the current climate crisis is at the end of our fork, and our responsible food choices are crucial in tackling climate change. Food for Earth gives us a new holistic approach to food systems, improving the world bite by bite.* ◀

- SESSION 05 | **ANTARCTICA**
- SESSION 06 | **RUSSIAN FEDERATION**
- SESSION 08 | **UNITED ARAB EMIRATES**
- SESSION 11 | **ITALY**



## Elizabeth Yorke

Co-founder, Edible Issues

► *Knowing where our food comes from is the first step towards ensuring we understand our food system. When armed with the knowledge of how the system works, we are in a better position to make smarter food choices, thus reclaiming the power from the industrialized system.* ◀

- SESSION 04 | **INDIA**

## Sara Roversi

Founder, FFI

► *Food is life, energy, and nourishment. It is the vehicle of values, culture, symbols, and identity - food is sociality. Eating is an essential activity for human beings, but it requires consciousness and awareness. Humanity will be able to adapt to the great changes we are experiencing only by putting humans back in the center.* ◀

- SESSION 07 | **SINGAPORE**
- SESSION 09 | **DEMOCRATIC REPUBLIC OF THE CONGO**  
**ETHIOPIA**
- SESSION 14 | **ITALY**
- SESSION 16 | **NEW YORK**
- SESSION 17 | **ILLINOIS**
- SESSION 21 | **COSTA RICA**
- SESSION 24 | **HAWAII**

## ● Cristina Petracchi

Leader, FAO elearning Academy

- *Sustainability is humanity's greatest goal and the only way forward. For this great purpose, we need competent professionals who are able and capable of taking appropriate decisions; formulating targeted and sustainable policies and strategies; and adopting innovative 'green' solutions, practices and technologies. In other words, we can only achieve sustainability through the development of capacities and transfer of skills and competencies.* ◀

○ SESSION 10 | MOROCCO



## ● Auriane Borremans

Founder, Eatention

- *The future of protein is cell based, plant based, fermentation based, but it is also cooking.* ◀

○ SESSION 13 | NETHERLANDS  
| NORWAY



## ● Carlo Giardinetti

Dean, Executive Education and Global Outreach, Franklin University, Switzerland

- *Even when eating alone we are part of an experience that includes dozens of past, present and future interactions. It is one of the most social and natural actions we do everyday. Yet in some parts of the world we are doing it in a disconnected manner, almost like a mindless action. This marathon brought me back to the awareness of how complex, rich and rewarding is the experience around food and meals.* ◀

○ SESSION 12 | EUROPE



## ● Gunnar Ólafsson

Founder, Djúpið

- *We can more easily reach our goals of true growth by inspiring future generations to help in the efforts. Together we can.* ◀

○ SESSION 15 | ICELAND



## ● Julia Dalmadi

Director, Community Programs, FFI

- *It is important that our future is inspired by our past and by what nature has designed for us. Agroforestry systems are perfect examples that can be adapted to different environments and contexts. Agroforestry systems with perennial crops can contribute to the well-being of local communities. On the other hand, we need initiatives that address social inequality, improve nutrition and engage people to leverage their skills for social good.* ◀

○ SESSION 19 | BRAZIL

○ SESSION 20 | COLOMBIA



## ● Karla Gonzalez Ramos

Food Innovation Program alum  
and lead FFI ambassador  
in Mexico

- *To create a more sustainable planet, we need to be willing to change and become more sustainable and conscious human beings.* ◀

○ SESSION 18 | MEXICO

➤ *At Future Food we often say that 'innovation is a cooperative effort.' The Food for Earth Marathon was a clear representation of this inclusionary, multi-stakeholder approach: In the US only, we involved people from New York's CPG industry; activists, chefs and educators from the Pacific Northwest; innovators from Silicon Valley; and farmers from the Pacific Islands. While the food system is a very complex one to tackle, I believe this marathon showed us how feasible it is to be close, even if apart.* ◀

**SESSION 23 | CALIFORNIA**

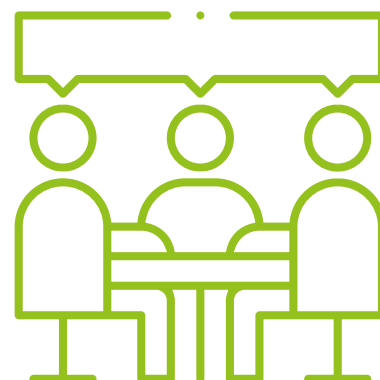
## Tim West

## Slow Food chef, social entrepreneur and food futurist

► *The Pacific Northwest continues to be a long-term strategic stronghold for North America as humanity races to keep pace with climate change. The plants and animals of North America continue to move north in search of abundant fresh water and healthy soils. So follows the food entrepreneurs who safeguard these natural resources and address humanity's growing challenges with fresh solutions. Join me, Tim West, Future Food Institute's Global Ambassador, as I discuss solutions to life's great challenges with some of the leading food entrepreneurs of the Pacific Northwest.* ◀

## SESSION 22 | CANADA

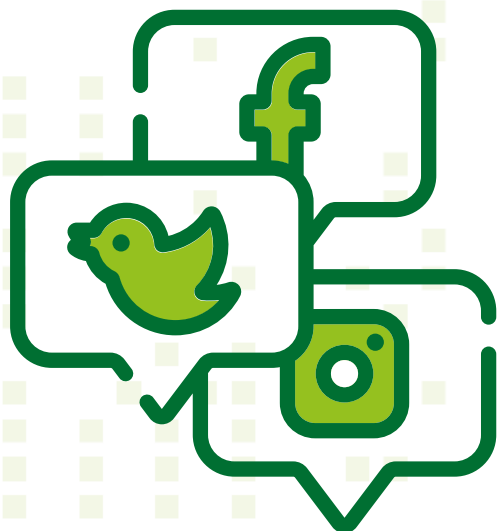
# MODERATORS



# THE RESULTS

THE 24-HOUR DIGITAL GLOBAL MARATHON FOR SUSTAINABILITY WAS A **SUCCESSFUL INITIATIVE.**

FFI and the FAO elearning Academy were very dynamic in their marathon outreach strategy with over 600 communication products disseminated through various media and channels, including videos, TV interviews, press releases, social media shares, news articles, newsletters and publications.



MORE THAN

# 10 000

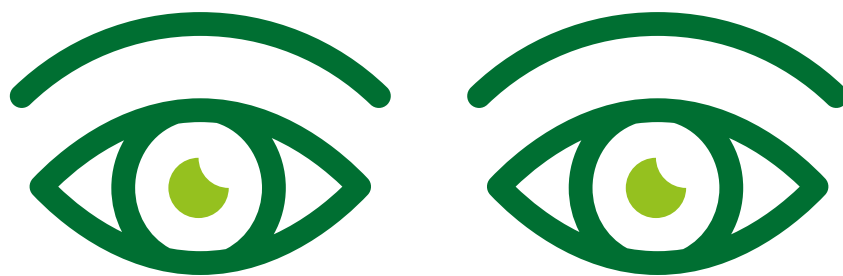
## SOCIAL MEDIA SHARES



### ARTICLES

Many national and local newspapers talked about the event:

► *Earth Day, the future of sustainable food with Future Food Institute and FAO* ◀ *La Repubblica*



MORE THAN

**100 000**  
VIEWS WORLDWIDE



**18**  
VIDEOS

The most viewed sessions are that of **Japan** with **over 6 500** views and **Hawaii** with **over 5 500** views.

AN AVERAGE OF

**6 000**  
**FOLLOWERS EACH SESSION**

An amazing audience from all over the world interacted with the speakers, session by session, via social media and YouTube, addressing comments and questions.





SESSION

01

CHINA  
SHANGHAI

04.00 hours [GMT]

12.00 hours in SHANGHAI



CLIMATE-SMART ECOSYSTEMS

# Food for Earth opening: Chinese envision sustainable development through food systems

- Jichao Fang • Maintain ecological balance and promote sustainable food production
- Jianchu Xu • Mountain futures: building a better future for mountain communities
- Siming Wang • The implication of China's traditional agriculture for sustainable development
- Hongmin Dong • China's policy and action on enhancing green development of agriculture
- Fengying Nie • China's experience, achievements and prospects in poverty reduction

HOST | **Kerong Wang** | FFIMODERATOR | **Dongxin Feng** | Chief, Partnerships and UN Collaboration, FAO







HOST | **Kerong Wang** | FFI

MODERATOR | **Dongxin Feng** | Chief, Partnerships and UN Collaboration, FAO

The opening session of the Food for Earth marathon focused on how to maintain ecological balance and promote sustainable food production, and how to build a better future for mountain communities.





**Jichao Fang**

Vice president,  
Jiangsu Academy of  
Agricultural Sciences

## Maintain ecological balance and promote sustainable food production



- The concept of maintaining ecological balance has been widely commended in the international community. Biodiversity is the primary indicator of an ecosystem's health because a wide variety of species cope better with threats than a limited number.

It is estimated that annually between 20 to 40 percent of global crop production are lost to pests. Each year, plant diseases cost the global economy around USD 220 billion and invasive insects around USD 70 billion. The common control methods ignore how varietal crop diversity could improve pest and disease management, restoring the ecological balance through natural approaches and food chain rule.

Good practices of such approaches are abundant in agriculture.

### → Controlling rust mites with predatory mites in citrus production

By releasing natural predatory mites in citrus orchards, the rust spider, a stubborn pest on citrus, has been successfully controlled, significantly increasing the citrus yield.

### → Controlling pests with predatory insects for ornamental plants

This approach is not only effective and environmentally-friendly, but it also helps in formulating natural populations and thus achieves the goal of sustainable ecological prevention and control.

### → Active induction of plant antibodies

When a plant senses some stressors in the surrounding environment, it produces certain chemicals, which in turn triggers the plant's resistance reaction. Making use of this principle, we can artificially synthesize substances that cause plants to produce antibodies or trigger resistance reactions, adjusting and restoring the ecosystem balance. Strong ties between global agencies and local governments have to support such innovations, which can be done through sharing knowledge.

➤ The development of an ecological civilization underlies a sustainable development of food production and therefore concerns the future of humanity. <

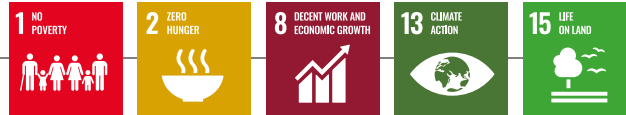




## Jianchu Xu

Director, Centre for Mountain Futures (CMF);  
Regional coordinator,  
World Agroforestry  
Centre (ICRAF) East  
and Central Asia Office

# Mountain futures: building a better future for mountain communities



The Mountain Futures Centre (CMF) is a five-in-one platform for production, learning and research. Their projects are about testing and demonstrating agroforestry systems while supporting the ecological protection and development of degraded land, forming a comprehensive ecological monitoring network and system of circular agriculture between forests, the environment and human settlements.

Their philosophic model and site-specific practices flow from three intersections: people and technology; people and nature; and people and society. Given that mountain communities around the world are repositories of sustainable traditional knowledge and resilient practices, we urge others to listen to the words of mountain people and integrate their location-specific wisdom into 21st-century practices.

This is what CMF does, drawing upon practices of the indigenous Hani people. Their circular farming system, developed over thousands of years of interdependence with natural landscapes, integrates disparate ecological elements into a resilient land management system.

The Hani have historically regarded aquatic plants and animals in their terraced rice fields as underutilized resources and encourage the breeding of certain aquatic animals in their rice paddies.

Fish droppings then serve as fertilizer for the soil, and insects can be used as feed for fish. CMF emphasizes the importance of creating agriculture value chains that link together producers (green plants), consumers (livestock and insects) and decomposers (edible fungi and microorganisms in the soil) to form a self-sufficient cycle. This process both enhances ecological restoration efforts and creates high-quality brands attractive to responsible consumers.

> In our quest to eradicate poverty and nurture robust ecosystem restoration, we have learned that ideas can grow, just like seeds, when tended with proper care. <



## Siming Wang

Professor and dean,  
Institute of Chinese  
Agricultural Civilization,  
Nanjing Agricultural  
University, China

# The implication of China's traditional agriculture for sustainable development



Chinese farmland has been cultivated for thousands of years. As one of the world's centres of agricultural origination, China has a rich agricultural heritage. Through this long-term interaction with nature, Chinese farmers learned that humankind is an indivisible part of the natural system and should follow nature's rule of "the unity of heaven, the earth, man and the crops."

With these principles in mind, farmers accumulated plenty of efficient and sustainable means of crop growing and farming systems. Thousands of years ago, Chinese farmers discovered that farmland must be fertilized while being continuously utilized.

Thanks to the organic and intensive farming systems of ancient times, China could meet the needs of a large portion of the population, and it became the solid foundation of an example of ancient civilization left to the present.

Chinese traditional agriculture is a crystallization of farmers' wisdom accumulated over thousands of years of practice, and it is still significant today. Organic farming and the integration of fertilization are valuable technological measures for food safety and environmental protection.

The numerous local products and specialties part of the ancient regional traditions are valuable resources for the booming rural economy. The diversified operations of cropping, poultry, animal husbandry, fishing and forestry are not only beneficial for the conservation of biological diversification, but can also better meet the various needs of small-scale farmers.

The ancient village, beautiful and rural scenery, and local cuisine are all precious cultural resources that can play an enormous role in the development of rural tourism as well as the integration of urban and rural areas into a harmonious and compatible relationship.

> The traditional top principle of pursuing 'harmony of man and nature' is in perfect accordance with the ultimate goal of sustainable development. <



**Hongmin Dong**

Deputy director, Institute of Environment and Sustainable Development in Agriculture, Chinese Academy of Agricultural Sciences (CAAS)

> Scientific and technological innovation is not only a prerequisite for achieving green agricultural development and coping with climate change, but also a challenging undertaking, which needs to gather the strength of global agricultural scientists. <

## China's policy and action on enhancing green development of agriculture



At the end of June 2015, China committed to developing “low-carbon agriculture,” making efforts to achieve zero-growth of fertilizer and pesticide use by 2020. To implement the ideals of green agricultural development and to mitigate greenhouse gas emissions by 2030, the Chinese government has successively issued a series of policies and measures.

Their comprehensive plan forms an agricultural development framework compatible with the carrying capacity of resources and the environment.

The agricultural department has focused on measures to realize the objectives of “one control, two reductions and three wastes recycled.”

**One control** refers to controlling the total agricultural water usage;

**two reductions** references reducing the total usage of fertilizer and pesticides;

**three wastes recycled** represents recycling livestock manure, plastic mulch and crop straw into useful resources.

Five green agricultural development actions have been launched and implemented, including resource utilization of livestock manure, replacement of chemical fertilizer with organic fertilizer in fruit-vegetable-tea production, crop straw treatment in Northeast China, the recycling of agricultural mulch film, and aquatic life protection action in the Yangtze River basin.

Crop straw could be used in many comprehensive ways, including for animal feed, fuel, fertilizer and other materials. Livestock manure can be utilized harmlessly and resourcefully through mechanical collection, centralized treatment at the county level, integration of crop and animal production, etc.

As of 2018, on the premise of stable grain production, the use of chemical fertilizers and pesticides in China has achieved negative growth for three consecutive years, proving that these policies can improve the local environment and mitigate the emission of greenhouse gases.



## Fengying Nie

Deputy director-general,  
Agricultural  
Information Institute,  
CAAS;  
Deputy director-general,  
Center for International  
Agricultural Research  
(CIAR), CAAS

# China's experience, achievements and prospects in poverty reduction



China has made remarkable achievements in poverty reduction. By the end of 2020, it is estimated that the entire population will have been lifted out of poverty. The strategy is anchored to four main concepts in which ministries, financial institutions, enterprises (including the private sector) and civil society all play their roles.

**First**, we should explore the establishment of poverty reduction mechanisms and poverty governance systems based on national conditions. The specific approach entails the central government undertaking the national planning while the provinces take overall responsibility, and cities and counties implement the actions.

**Second**, poverty alleviation via industrial development is a foundational step towards poverty elimination and is a sustainable model for China's poverty alleviation practices. By taking advantage of local resources to cultivate and develop local competitive industries, poor households can be directly employed by participating in the industrial chain of the food production system.

**Third**, the cultivation of human resources is a long-term strategy for sustainable development practices. To improve food security and nutrition of the poor rural population, rural schools can launch a nutrition improvement programme for students.

**Fourth**, innovation is vital for sustainable poverty reduction. Poverty alleviation requires technological advancement, and e-commerce provides farmers with significant employment opportunities. It also provides farmers in poor areas who produce traditional, featured and high-quality products with new and convenient ways to reach consumers. The development of e-commerce also highlights the contribution of women. More and more women in China are participating in e-commerce, improving their contribution to household incomes.

> Industrial development is the fundamental way for sustainable poverty elimination. <



## | Highlights |

- To promote sustainable food production, it is necessary to protect biodiversity and ecological balance through nature-centred approaches.
- We should rely on mountain communities' practices for ecological protection and farming systems.
- Chinese farming traditions and agricultural practices are a good example of sustainable agriculture.
- Government policies need to be more inclusive and consider vulnerable groups such as: the elderly, women, children, youth, individuals with disabilities, migrant workers and others. To reduce poverty, it is essential to adopt coping strategies and mitigate risks.
- China attaches great importance to green agricultural practices and has demonstrated that green and low-carbon policies can invert negative environmental trends.





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NETHERLANDS

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20 | COLOMBIA

22 | CANADA

24 | HAWAII

# SESSION 02 JAPAN TOKYO

05.00 hours [GMT]

14.00 hours in Tokyo



FOOD IDENTITY

## Japan, between food tradition and innovation

Charles M. Boliko • Planet, food systems and Sustainable Development Goals

Chris Krause • Kyobashi Living Lab

Miica Fran • Panel discussion  
 Minori Ogawa  
 Kyoko Nagano  
 Jon Walsh

HOST | **Chris Krause** | Director, Kyobashi Living Lab, FFI Japan

MODERATOR | **Momoko Nakamura** | Conservationist and storyteller, Rice Girl; author of *Plant-based Tokyo*







**HOST | Chris Krause** | Director, Kyobashi Living Lab, FFI Japan

**MODERATOR | Momoko Nakamura** |

Conservationist and storyteller, Rice Girl; author of *Plant-based Tokyo*

The second session brought together panellists and actors of the Japanese agri-food system. In the first part, four panellists discussed how food technology innovations and opportunities can lead to sustainability, and the FFI experience of creating a sustainable food ecosystem in Tokyo was used as an example. In the second part, a panel discussion among Japanese entrepreneurs highlighted the country's food system characteristics.

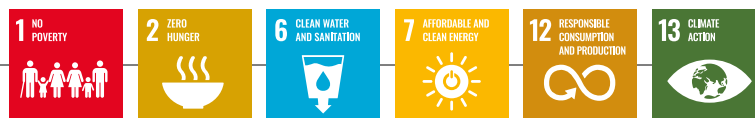




**Charles M. Boliko**

Director, FAO Liaison  
Office, Japan

## Planet, food systems and Sustainable Development Goals



While it is recognized that all SDGs are equally important and interdependent, food production and consumption have a significant footprint on the environment, and the battle to achieve the SDGs cannot be won without the establishment of better food systems. Indeed, the world's agri-food systems face unprecedented challenges.

By 2050, the world population will reach nearly 10 billion people, requiring an increase of food production by no less than 50 percent to guarantee food security for all.

The real challenge is finding a sustainable way to upscale food production so that everyone has access to a sufficient amount of good-quality food. We need to be creative and innovative to build up sustainable solutions that will help achieve many SDGs.

Several good practices in achieving sustainable food production are being developed around the world through climate-smart agriculture and sustainable urban food systems.

Since 2002, when FAO established the Globally Important Agricultural Heritage Systems (GIAHS), the initiative has recognized food production systems that rely on traditional knowledge passed from generation to generation to achieve food security within communities while preserving the environment.

The successful transformation of our current patterns requires the involvement of all stakeholders from public and private sectors, civil society, as well as partnerships that facilitate the necessary policy development, capacity development and resource mobilization. In the meantime, every citizen of the world can contribute, however small, to SDG 12, which calls for "responsible consumption and production." Every one of us should be aware of our role in saving the planet.

> Yes, we can  
and must transform  
food systems,  
save the planet  
and save ourselves.  
Together! <



## Kyobashi Living Lab

### Chris Krause

Director, Kyobashi Living Lab, FFI Japan



Chris Krause presented the sustainable food ecosystem that FFI and Tokyo Tatemono - a Japanese real estate company with a long-term vision of building an innovative and sustainable city - are creating in the Kyobashi neighbourhood of Tokyo. Known for being the urban fish and vegetable market, this area has been the centre of "food culture" in the city for over 300 years, and this partnership aims to build a sustainable food community around it.

With the idea of respecting traditions while embracing innovation, the Kyobashi Living Lab was created as a space for bringing together changemakers of the public and private sectors.

Through a series of interactive and impact-focused programmes and activities, it aims at building a dynamic community composed of individuals, organizations and companies committed to sustainably improving food systems in Tokyo and beyond.

The venue comprises different areas, including a kitchen space to host workshops with chefs from Japan and abroad to learn about the cultural and entertainment side of food. It also is home to the world's most advanced indoor farm - PlantX - growing nutrient-dense food in urban environments under controlled settings.

Moreover, through a collaboration with Pocket Marche, there are plans to host a green market directly connecting producers and consumers.

> On the 50th anniversary of Earth Day, with the world in a peculiar state given the COVID-19 pandemic, it was very powerful to connect with members of our community committed to improving food systems in Japan in ways that respect and give back to the planet. It was also impactful to tune in for the other sessions from all around the world and connect with a dynamic group of changemakers working on initiatives that recognize and respect the earth as our only source of food, life and future. <

## PANEL DISCUSSION



### Momoko Nakamura

Conservationist and storyteller, Rice Girl;  
author of *Plant-based Tokyo*



### Miica Fran

Food creator, Bio Labo House



### Minori Ogawa

Founder/CEO, Dana Village;  
CEO, Chardjou Nishiaizu Farm



### Kyoko Nagano

Director, Sake Lovers Inc.;  
CEO, mypal Inc.



### Jon Walsh

Urban farming  
consultant-specialist;  
activist;  
founder, Business Grow





## PANEL DISCUSSION

> People in Japan are learning the sustainable and zero-waste lifestyle little by little. <

Miica Fran

> Be a change! <

Minori Ogawa

> To impact this field, make a difference and change the world, you have to combine a seed with the motivation to sow it, and then spread that passion. <

Jon Walsh

- The panel discussion, moderated by Momoko Nakamura, focused on the **Japanese food system** and its characteristics, highlighted by speakers actively working in the agri-food sector.

Nakamura underlined how the **challenges** Japan faces with its food system stem from policies made after the World War II era. While the intentions of these policies may have been good as war recovery efforts, they have redefined the entire ecosystem – a system that for 2 000 years had been attuned to the natural environment.

The same policies that were meant to do good have tragically undermined Japan's native intelligence concerning farming, leaving a country of farmers unhealthy and underpaid, and consumers detached from an earth they need to thrive. The topics discussed include:

### Farmers/consumers

Today, there is no direct communication between food producers and consumers, with the employment of middlemen undermining farmers' revenues. But technology has empowered us, and Pocket Marche is trying to build a decentralized food distribution system to localize for better distribution with less energy, food loss and plastic packaging, and better pay for farmers.

### Growing our food

To tackle the global issue, especially in Japan and specifically in terms of packaging and carbon footprints, people need to learn how to grow their own healthy food no matter where they live in the city.

As Jon Walsh stated, millions of square feet of vacant rooftop space in Tokyo could be converted into lush gardens that could become natural oases, food education centres and urban food sources for both the well-fed and the hungry. Millions of people could understand how to grow their own healthy food.

Tokyo is just one city, and it has sky-high potential for positive change that would transform the physical landscape as well as the mental landscapes of its citizens.

> Power of koji mold! Fermentation can be the key to solving food loss, bringing health benefits and enhancing the immune system. <

**Kyoko Nagano**

### Getting innovative

During COVID-19, Sake Lovers supported small craft sake breweries to shift towards online sales, and it is going to create sake e-commerce sites supporting small craft breweries.

They also started virtual sake tasting events, where people could virtually travel inside the breweries.

The Japanese micro seasonal calendar breaks down the four seasons into 72 categories – meaning every five days, the micro season changes. It is a powerful reminder that nature is an ever-changing system.

People have been referring to this calendar for years for food preservation and fermentation.

Fermentation is a great way to preserve food, with added health benefits and added value to the vegetables while preventing food loss.

## | Highlights |

- The successful transformation of current food systems requires the involvement of all stakeholders from the public sector, the private sector and civil society, building together effective partnerships that facilitate the necessary policy development, advocacy and awareness-raising, capacity development and resource mobilization.
- During the pandemic, the world's cities have been tested in their resilience. The combined realities of COVID-19 and the effects of climate change are forcing urban planners to rethink how cities should evolve to respond to the needs of the future and continue to host thriving communities.







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24 | HAWAII



# SESSION 03 CHINA BEIJING

07.00 hours [GMT]

15.00 hours in China



CLIMATE-SMART ECOSYSTEMS

## Chinese vision of sustainable development through food systems

- Chenggui Li • To maximize the double benefits of ecological protection and economic development
- Xiaofeng Dai • Natural plants solve the scientific issues of green agricultural animal production in China
- Minggang XU • Strengthen farmland management, prevent soil degradation and protect the Earth
- Pao Xu • The present and future of aquaculture
- Gubo Qi • Re-narrating sustainable agriculture in a new era

HOST | **Kerong Wang** | FFIMODERATOR | **Dongxin Feng** | Chief, Partnerships and UN Collaboration, FAO







HOST | **Kerong Wang** | FFI

MODERATOR | **Dongxin Feng** | Chief, Partnerships and UN Collaboration, FAO

During the 24-hour marathon's third session, the second to be held in China, the speakers shared their thoughts and evidence about agricultural sustainability in the national context, sustainability in terms of animal feed issues, solutions provided for soil acidification, the present and future of aquaculture in China, and the importance of the narrative of sustainable agriculture given this particular moment we are living.

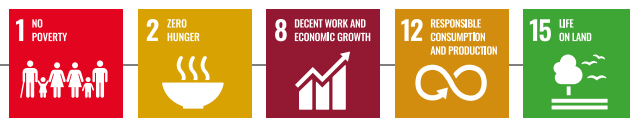




## Chenggui Li

President and professor,  
Beijing Academy of  
Agriculture and Forestry  
Sciences (BAAFS)

## To maximize the double benefits of ecological protection and economic development



Through its rapid economic growth, China has begun to pay more attention to ecological protection issues. However, economic and ecological goals are too often seen as trade-offs rather than being juxtaposed, which leads to conflicts of interest and social tensions. According to the characteristics of resources in Beijing, BAAFS has carried out production demonstrations such as circular agriculture and under-forest economy in the suburbs of Beijing to maximize the double benefits of ecological protection and economic development.

Through feeding chickens and cultivating edible fungi, traditional Chinese medicine and flowers, the agroforestry complex ecosystem has been formed in Beijing. It not only protects a good ecological environment but also achieves considerable incremental economic and social benefits.

Through the fermentation of agricultural wastes, resource utilization has been accomplished. With the aim of protecting the Miyun Reservoir water source and focusing on the development of rural tourism, research is being done on rapid fertilization and the replacement of chemical fertilizer.

The objective is to build an agroforestry complex biological buffer zone on slope land which has not only developed an under-forest economy but has also increased surface coverage to control runoff and soil erosion.

Currently, BAAFS is conducting some practices in neighbouring provinces. On behalf of BAAFS, Chenggui Li expects that their technical system and successful experiences will be useful outside of China.

> Through scientific and technological progress and industrial optimization, we can achieve more ecological and economic products at the same time and embrace green development. <





## Xiaofeng Dai

Director-general and professor, Animal Feed Institute, CAAS

# Natural plants solve the scientific issues of green agricultural animal production in China



China is the largest animal-breeding country and, for a long time, China's animal feeding and breeding models for increasing production introduced many risks and unsustainable development problems, such as dependence on growth-promoting antibiotics and excessive residue in animal products.

However, China's society has entered a new historical stage of high-quality development focusing on the pursuit of food nutrition and health.

To foster agricultural sustainable development, one of the main goals for the next 30 years is the employment of sustainable methods for green agricultural animal production.

For this purpose, traditional Chinese herbal medicine plays an increasingly important role in economic and social development, providing real and historical opportunities for cross-border integrated development. Recently, attention has been paid to the hypothesis that Chinese herbal medicine, or its functional factors, affect animal physiology and growth through regulating the intestinal tract and microorganisms.

The combination of modern biotechnology with traditional medicine science and modern animal husbandry is the new exploration field for developing new technologies and modes of animal breeding, in order to provide more green and safe animal products.

Moreover, in July 2019, the Chinese Ministry of Agriculture and Rural Affairs announced that from 2020 all growth-promoting drug feed additives, except traditional Chinese medicine, will be prohibited. It is the most stringent set of policies on the prohibition, restriction, reduction and substitution of antibiotics.

> Chinese herbal medicine plays an increasingly important role in economic and social development, providing the reality and historical opportunities for integrated cross-border development. <



## Minggang Xu

Director-general and professor, South SubTropical Crop Research Institute, Chinese Academy of Tropical Agricultural Sciences

# Strengthen farmland management, prevent soil degradation and protect the Earth



In the latest century, global soils degraded severely due to high-strength and unreasonable land utilization, threatening global food safety. Especially in China, where the chemical fertilizer application rate is three times higher than that in Europe and America, the land bears an excessive burden.

Soils degrade in different ways, and acidification is a serious issue in the red soil regions of South China. Crop harvesting, acid deposition and the application of chemical fertilizers are three primary reasons for the accelerated red-soil acidification in China.

Long-term observations showed that, under existing production conditions, the use of chemical fertilizers is the principal factor for acidification and, based on the finding that organic fertilizers can prevent and control acidification, they developed farmland soil management technologies that can do so.

This research provided an organic-inorganic fertilizer rate, under which the net acid output is zero in the crop system: No soil acidification will be caused in the red soil region in South China if 28-36 percent of chemical nitrogenous fertilizers are replaced by organic fertilizers.

These technologies have been used for agricultural production by the Ministry of Agriculture and Rural Affairs of China in the last decade, creating remarkable social and economic benefits.

For instance, in the past three years, it was used on 7.21 million hectares in different provinces, making pH values increase by 0.2-1.0 units and crop output increase by 12-27 percent. These technologies revealed the driving mechanism of red-soil farmland acidification in China and provided feasible solutions.

> Healthy soils lead to healthy foods. Hence, only healthy soils can enable us to live healthily. <

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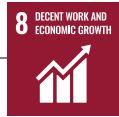


## Pao Xu

Director, professor and PhD supervisor, Freshwater Fisheries Research Center, Chinese Academy of Fishery Sciences (CAFS)

> Aquaculture has a bright future and it can help increase farmers' income and fish supply, create more job opportunities and prevent overfishing by providing an alternative option in the fishing sector. <

## The present and future of aquaculture



Aquaculture has become a worldwide practice and is the fastest method for fisheries production. In the past 40 years, China's aquaculture has experienced a stage of rapid development, successfully achieving a historic shift from capturing to farming, solving a fish shortage problem. In 2018, China's total aquaculture output accounted for 77.3 percent of all aquatic products.

As a result, it increased the supply of high-quality animal protein, guaranteed national food safety, improved the nutrition and health level of all Chinese people, and reduced the harvest of fishery resources in natural waters.

Likewise, it contributed to purifying water, reducing carbon dioxide emissions and alleviating the eutrophication in bodies of water. These benefits notwithstanding, global aquaculture faces many challenges, such as uneven development, poor industrial chain connections, environmental protection difficulties and a lack of technical support. For these reasons, technologies must be continuously improving.

The structure of cultured species has been optimized and a healthy ecological farming method has been promoted. Mechanization, informatization and intelligence have advanced, and a variety of highly efficient farming methods, such as the recirculating pond aquaculture system and integrated fish farming, have been developed.

In particular, it is necessary to establish a sustainable aquaculture model that focuses on saving water and land; emission reduction; and sustainable development through technological transformation, management innovation and knowledge sharing.



## Gubo Qi

Professor, College of International Development and Global Agriculture and College of Humanities and Development Studies, China Agricultural University

## Re-narrating sustainable agriculture in a new era



> One Health becomes the major melody of sustainable agricultural narratives in a new era, requiring agricultural research to contribute directly to poverty reduction, rural revitalization, eco-civilization and social development. <

Along with the COVID-19 crisis, various institutions, groups and individuals are committed to controlling the pandemic while taking action in mitigating its negative impacts. Given the evident importance of the agri-food system, many agriculture universities, academies and social organizations started to develop technology cooperation, professional farmer training, consumer awareness education and other initiatives to be actively involved in the sustainable development of innovative agriculture.

China Agricultural University is among these active institutions. The College of Resources and Environment promoted an initiative for providing services to farmers, entrepreneurs and other production organizations.

The College of Animal Medicine engaged in strong scientific support of national action on the control of medicine-resistance and reducing antibiotic usage.

The College of Food Science researches fruit and vegetable processing, new food resources exploration, functional food, etc., to provide technical support for a widening agricultural value chain.

The College of International Development and Global Agriculture took action on poverty reduction research, developing new opportunities for agri-tourism together with local government and villagers and promoting nationwide marketing channels for promoting local agricultural products.

The mission of agricultural research should go beyond, covering poverty reduction, rural revitalization, eco-civilization and social development. The agricultural system is the promoter of One Health in human beings, living things, nature and society, and this approach becomes the major melody of sustainable agricultural narratives in the new era.



## | Highlights |

- Circular agriculture and under-forest economies have been implemented in the suburbs of Beijing, resulting in increased protection of the ecological environment and other incremental economic benefits.
- By combining the traditional Chinese medicine principle of holistic dialectical thinking, the concept of food and medicine homology, the theory of ecology and biology, and the technology of digitalization and big data, we can cross the long-standing industrial gap and technical isolation between pre-production, mid-production and post-production.
- Soil's healthy development can turn into a common understanding, but is only possible through endless effort to monitor soils and intensifying the prediction and early warning of soil quality change.
- It is necessary to establish a sustainable aquaculture model focused on water-saving, land saving, consumption reduction, emission reduction and sustainable development through technological transformation and management innovation.





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# SESSION 04 INDIA BANGALORE

08.00 hours [GMT]

13.30 hours in Bangalore



FOOD IDENTITY

## How to empower communities to establish food sovereignty?

Ajay Vir Jakhar

The pull factor "fork to farm"

Fiona Arakal

New challenges for the Indian food industry

Simrit Malhi

Food sovereignty amongst urban citizens during the pandemic revives urban micro-communities - possible solution to India's food distribution systems for rural farmers

MODERATORS | **Anusha Murthy** and **Elizabeth Yorke** | Co-founders, Edible Issues







## MODERATORS |

**Anusha Murthy** and **Elizabeth Yorke** | Co-founders, Edible Issue

This panel discussion session focused on the impacts of the COVID-19 pandemic on farmers, their families and the small local agricultural system in India, with an overview of its current state.

The panel also debated the future of food post-COVID, questioning how to move towards more sustainable approaches, empower local communities and achieve policies that can put people's need for food at the centre.

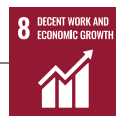




## Ajay Vir Jakhar

Chairman, Bharat  
Krishak Samaj  
(Farmers' Forum)

## The pull factor “fork to farm”



- Even though work in rural areas during the initial lockdown period carried on as before, the pandemic has adversely impacted consumption patterns.

With the decrease in demand for specific products such as chicken, eggs, dairy and vegetables, farmers of perishable goods have been forced to waste their harvests, facing the challenge of either not selling at all or not selling at fair prices. Consequently, an increasing number of farmers started switching to the production of non-perishable products that – even if demand drops – can be stored over time.

Accepting that the whole food system needs a change, especially in supply chain management, is the first real challenge in protecting the production of highly perishable foods.

With over 25 percent of the population becoming unemployed in India, the priority is to ensure that everybody, especially the most vulnerable, has access to enough quality nutritious food. This is the government's responsibility.

They have enough grains for distribution, and could also consider urban kitchens for people in need. According to Jakhar, the real challenge is low income and wages.

Consumers must be able to afford and pay farmers the real cost of growing food. There is also a need to increase awareness in consumers that good quality and sustainable food have a higher price than monoculture products grown with massive use of chemicals.

For long-lasting change in the whole food system, we need to redefine what success looks like and document failure by engaging with food producers themselves. Governments, too, need to look inward.

> The real challenge is low income and wages. Consumers must be able to afford and pay the real cost of growing food to farmers. <



**Fiona Arakal**

Director,  
Ishka Farms

## New challenges for the Indian food industry



- One of the most urgent criticalities that the COVID-19 pandemic has brought to light is the food distribution system. Today, only a small percentage of food is directly delivered to households.

Among those businesses that have worked with consumers even before the pandemic, such as Ishka Farms, there have been severe limitations due to the interruption of the Indian Railway services, which is the primary transportation for distribution.

On top of that, setting up alternative delivery channels such as online delivery platforms is extremely difficult in India, as there is no centralized system.

With a background in entrepreneurship rather than traditional farming, one of the main lessons learned from the experience of Ishka Farms is that the key to survival is creating multiple markets .

For example, even though Ishka Farms was not able to supply restaurants during the COVID-19 lockdown, they were still able to deliver food directly to consumers' houses. In addition to diversifying supply methods, Fiona Arakal said it is equally important to avoid monoculture, instead prioritizing product diversification as a key pillar to grow food while also regenerating and nurturing the land.

Relying on local workers represents a necessary step to reduce and prevent the future risks of a labour shortage. The challenge in India comes when bureaucracy introduces limitations of movement on farmers without adequately considering the local contexts, such as understanding where farms are spread and how they work.

As outlined by Arakal, it is understandable to have boundaries, but these cannot be mere lines drawn on a map. This has been precisely the case in the decision of denying agricultural workers the ability to cross the boundaries of their own villages during the pandemic.

> There may now be an appreciation for and willingness to pay the 'true price' of food grown following sustainable farming practices. <



## Simrit Malhi

Founder,  
Roundstone Farms;  
Permaculture Design  
Consultancy (S.E.E.D)  
in Mumbai

# Food sovereignty amongst urban citizens during the pandemic revives urban micro-communities – possible solution to India's food distribution systems for rural farmers



Roundstone Farms is based on an education model and works as a knowledge-keeper. During the COVID-19 lockdowns, founder Simrit Malhi noticed people showing an ever-increasing interest in food-growing methods that are self-sustainable. Urban citizens suffered from a broken supply chain and consequently had to rethink where they got their food.

According to Malhi, education means sharing information and knowledge with other people, starting with neighbours and individuals living in the same community. It is difficult to maintain absolute food sovereignty, especially for India's urban population, but permaculture represents a great solution to

develop multi-crop farms and sustain a family's needs without requiring everybody to become a farmer. Within the same building, for example, individuals can decide to grow different foods, sharing or exchanging products with the rest of the community.

Whether developed on balconies, green roofs or a couple of pods per family, people have begun to educate themselves through urban farming, which can lead to a demand-driven change in the food system – from fork to farm rather than vice versa. Difficult and challenging situations, such as those which we have been experiencing, are the best moments to move people towards mutual support and a thriving sense of community. Additionally, letting go of some of the dependency on government and traditional food systems has reinforced the spirit of community and self-sufficiency.

> The Corona pandemic has helped urban citizens become acutely aware of India's food supply chain and all its discrepancies. This has led to an increase in urban farming and an interest in where and who is growing our food. More dialogue between rural farmers and urban citizens, even in an informal way - maybe through weekly farmers markets - will greatly benefit both parties and vastly help India's food distribution models. <

Most importantly, the pandemic has highlighted the discrepancies within India's current food supply system. Sustainably growing a diversity of crops, as opposed to mono-cropping which is dependent on chemical pesticides and fertilizers, is still not an economically viable option for Indian farmers, as produce is sold wholesale through unified channels. If rural farmers had a way for their produce to directly reach urban centres, without the necessity of a middle-man, or even if there was more communication between the two, a relationship between farmer and urban customer can begin, vastly increasing the health of both.

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## | Highlights |

- To incentivize collaboration among small farmers and enable them to directly reach consumers, it is necessary to dismantle the current food system and reduce the power of large monoculture companies.
- As a starting point for the population to increase awareness and demand for better quality food, urban farming needs to be encouraged.
- A new way of thinking about the urban food system relies on the concept of community and on its role in making urban farming possible.





# SESSION 05 ANTARCTICA

09.00 hours [GMT]

17.00 hours in Antarctica



CLIMATE-SMART ECOSYSTEMS

## Climate-smart ecosystems Antarctica, the unspoiled land at the edge of the world

Giuditta Celli

Studying Antarctica to understand climate change

Alberto Salvati

Life in Antarctica: the experience of Concordia Station

MODERATOR | **Claudia Laricchia** | Head, Institutional Relations and Global Strategic Partnerships, FFI







**MODERATOR | Claudia Laricchia |**

Head, Institutional Relations and Global Strategic Partnerships, FFI

This session lands in Antarctica's Concordia Station, where the research crew shared some insights on their life at Concordia and their work on monitoring climate change trends.





## Giuditta Celli

Climate shaper and former researcher in Antarctica

# Studying Antarctica to understand climate change



Antarctica, in the South Pole, hosts many research stations from countries all over the world. The Concordia Station, which opened in 2005, is a French-Italian facility that was built 3 233 metres above sea level at a location called Dome C on the Antarctic Plateau.

Concordia Station is the third permanent, all-year research station on the Antarctic Plateau, after Vostok Station (of the Russian Federation) and the Amundsen-Scott South Pole Station (of the United States of America), which is at the Geographic South Pole.

Concordia is operated jointly by scientists from France and Italy, and regularly hosts European Space Agency scientists.

From November until February 1, it hosts participants (technical and scientific) of the summer campaign.

Then, a small group of people remains in complete isolation for nine months to continue activities during the polar winter.

Ongoing research work concerns studies in glaciology, chemistry, atmospheric physics, astrophysics, astronomy and geophysics. The supply and connection of the base are ensured by different means of transport, both air and land.

Much of the material – about 350 tons – is transported by three land convoys organized during the summer campaign. Typically, a convoy consists of two snowcats and 6-8 tracked tractors.

Cohabitation is challenging in such a harsh environment and, for this reason, the participants follow a training programme on managing stressful situations, experiencing extreme weather conditions and team-building activities.

> The most vulnerable thing is us, humans. <  
Luca Parmitano

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## Alberto Salvati

Scientist,  
Italian National Research  
Council

## Life in Antarctica: the experience of Concordia Station



The world is sick, and we have been aware of that for 30 years now. The main issue is pollution, and at Concordia Station, the crew studies the anthropogenic pollution concentrated in the Antarctic atmosphere and coming from different continents.

They work with aerosol systems, looking for quantities of impurity and dust of chemical elements found in the atmosphere.

At Concordia, they also run a biomedical research programme. The European Space Agency is quite interested in looking at Antarctica as an analogy for future space habitats, because the extreme conditions on land have quite a lot in common with living in space: isolation, confinement and monotony.

They conduct several projects there, both psychological and physiological, as well as experiments on the whole crew to make progress for the future.

Living in Antarctica is a daily challenge due to the inhospitality of the wildland and the lack of facility for human life. In order not to alter the environment with a human footprint, all the stations have to reduce their living and running impacts.

For this reason, Concordia recycles 85 percent of its water and carefully economizes its energy. They try to waste as little as possible, considering the high costs, amount of fuel and money needed to provide for everything. Managing the food system is challenging as well.

Tractors from other stations supply food, and cooking is very different than in any other place.

> With the problem that we currently have on all the continents, maybe we will understand that the planet is very fragile, like humans, and we must save it. <



## Highlights

- Studying Antarctica is important because extreme conditions of the land make it an analogy to future space habitats.
- Concordia Station is a point of reference for the international scientific community regarding research activities in those areas of science considered strategic, such as astronomy, astrophysics, seismology, atmospheric physics and climatology, as well as biology and medicine.



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# SESSION 06 RUSSIAN FEDERATION | MOSCOW

09.30 hours [GMT]

12.30 hours in Moscow



FOOD DIPLOMACY

## Measuring progress towards sustainable food and agriculture

Victoria Panova

Russian BRICS chairmanship: case for agricultural cooperation and sustaining food security

Amy Heyman

Monitoring sustainable food and agriculture in the context of the SDGs

MODERATOR | **Claudia Laricchia** | Head, Institutional Relations and Global Strategic Partnerships, FFI





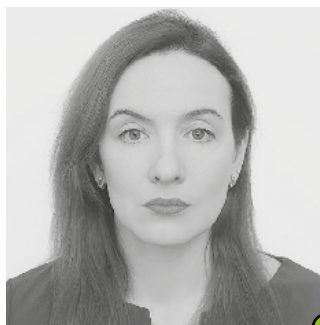
**MODERATOR | Claudia Laricchia |**

Head, Institutional Relations and Global Strategic Partnerships, FFI

This session highlighted the Brazil, Russian Federation, India, China and South Africa (BRICS) initiatives for promoting sustainable food and agricultural systems among member countries, and how to monitor and measure progress towards sustainable agriculture through the framework of the **17 SDGs**.







**Victoria Panova**

Vice rector,  
Far Eastern Federal  
University

## Russian BRICS chairmanship: case for agricultural cooperation and sustaining food security



> The world needs a new model of cooperation and new responsible leadership. That is where BRICS should come [in]. <

While the world is currently tackling the threat of the novel coronavirus, many regions face the additional difficulties of hunger, agricultural unsustainability and food insecurity. The BRICS countries are among the top 20 global food-exporting countries, and their cooperation in the agricultural field, which began in 2010, led to the development of four priority areas: creating an agricultural information base of BRIC countries; developing a strategy for providing food to the most vulnerable; adapting agriculture and food security to climate change; and cooperating in the field of agricultural technologies and innovations. With the five countries playing a considerable role in agricultural production, several challenges are addressed, such as conservation of soil fertility to tackle land degradation and insufficient development of nutrition-friendly sustainable agriculture, stemming from the lack of investment in small and medium farms.

To overcome this issue, a multi-stakeholder platform to attract such investments was established, together with the provision of a series of workshops for farmers and all other potential stakeholders for the adoption of sustainable, nutrition-friendly practices. Within the framework of Russian BRICS chairmanship in 2020, one of the announced priority areas of cooperation is "to encourage dialogue among the five countries on agriculture and food security."

With BRICS owning more than half of the global biodiversity potential, the conservation of biodiversity and genetic resources is crucial for agricultural sustainability. To foster scientific development, governments agreed on offering grants for BRICS joint breakthrough projects. The required actions would include some applied research to develop the indicators for sustainable, nutrition-friendly agriculture that includes the indices of land degradation, the impact on greenhouse gas emission or sequestration, the indices for assessing healthy agricultural production, and the ecological footprint of the food systems. Another suggestion would be in the area of education, offering joint or network educational programmes for bachelor and master's level students.

Thus, Far Eastern Federal University has several programmes with Tokyo University of Agriculture in research and education, and such projects could be scaled up to other countries, especially BRICS. Concerning the interdependence between food security and the quality of agricultural products, experts proposed to improve mechanisms of information exchange at the interstate level between the national BRICS bodies about products dangerous to human life, health and heredity, property, and environmental protection.



**Amy Heyman**

Programme officer  
on Sustainable Food  
and Agriculture, FAO

## Monitoring sustainable food and agriculture in the context of the SDGs



- The world is experiencing an unprecedented confluence of pressures that requires a transformative change towards sustainable agriculture. It is at the core of the 2030 Agenda, as it contributes to many of the SDGs, playing a critical role in reducing poverty, preserving resources and driving positive change.

As stated by Amy Heyman, these actions need to be implemented as well as monitored for better evidence-based policymaking and, to have quantitative evidence, there is an international SDGs monitoring framework that governs this process.

Many actors are involved, including 28 member countries, the UN Statistical Commission and international organizations such as FAO, which monitor the whole body of 232 unique indicators for the 17 goals. Each SDG indicator has been associated with a custodian agency that leads methodological development of new indicators and provides statistical support to countries for the whole data collection and monitoring process at the national level.

FAO is a custodian agency of 21 different indicators that span a variety of goals. SDG2 “zero hunger,” in its indicator 2.4.1, defines what sustainable agriculture operatively means: “the percentage of agricultural area under productive and sustainable agriculture.”

As the custodian UN agency, FAO has been working together with experts from national statistical offices, international organizations, civil society and the private sector to develop the methodology and build support for this important indicator, which represents the multidimensional nature of sustainable agriculture.

Eleven themes and associated sub-indicators provide quantitative information: land productivity, profitability, resilience risk, soil health, water use, fertilizer, pesticide risk, biodiversity, decent employment, food security and land tenure.

To capture the concept of continuous progress towards sustainability, data are reported with a dashboard using a traffic-light approach (red, yellow and green) to indicate sustainability status.

The dashboard allows countries to easily visualize their performance by sub-indicator and thus understand where their policy efforts may best be focused. Yet collecting the data is not sufficient. One of the most important steps is making sure the information gets used by decision-makers – but this is often difficult as a result of fragmented data governance within the countries.

> Sustainable food and agriculture are at the heart of transformational change. <

## Highlights

- Through cooperation, BRICS countries are actively involved in solving agricultural challenges within their countries and the greater BRICS community.
- A transformative change towards sustainable agriculture is essential, and SDG indicator 2.4.1 paves the way to monitor the success in this direction.
- Ensuring data on sustainable agriculture reaches policymakers is paramount.



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# SESSION 07 SINGAPORE

10.00 hours [GMT]

18.00 hours in Singapore



CIRCULAR LIVING

## Food innovation, a strategic driver for sustainable development

- Valerio Nannini • Innovation and connectivity for a better food system
- Adam Lyle • Food for all! We need a systems-thinking perspective

MODERATOR | **Sara Roversi** | Founder, FFI



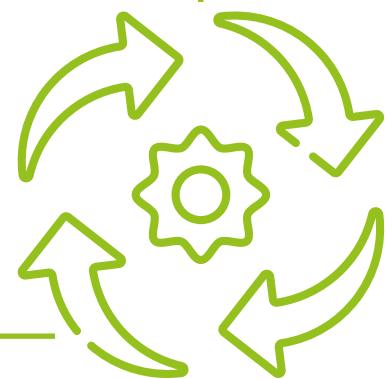




MODERATOR | **Sara Roversi** | Founder, FFI

This session focused on the challenges and opportunities facing the entire food sector, especially after the lockdown generated by the COVID-19 pandemic.

The speakers have specifically shared some progressive thinking on innovation as a strategic driver for reshaping the food system, with some insights from the situation in Singapore.





## Valerio Nannini

Innovation enabler;  
founder,  
Nannini & Partners

> The network is  
more powerful than  
individual people. <

## Innovation and connectivity for a better food system



Over the past few years, Singapore has represented one of the most innovative places for the food industry as a result of specific government and institutional support, facilitating and catalysing innovation. Singapore currently imports 90 percent of its food production and the government aims to have its food supply be 30 percent locally-produced by 2030 (10 percent proteins, 10 percent vegetables and 10 percent fruit). This implies several challenges for the country in the next few years.

The first relies on the limited availability of land characterizing the city-state and the consequential urgency of relying on external agricultural practices.

The second challenge is in combining food production and adequate nutrition: While the debate on alternative proteins is still in its infancy, it has to be evaluated together with broader considerations such as nutrition density needs and potential interference with foreign markets. As an example, Valerio Nannini has stressed the pivotal role that peas and chickpeas play as high-quality proteins. But they also represent competing areas with developing countries, where the population generally relies on those ingredients as staple sources of nutrition. All these considerations are necessary to increase the attention on nutritious food, a topic that is not yet adequately considered.

Following the typical pattern of a crisis, from this current situation there is the potential for a new evolution in the innovation space. There is a paradigm shift in which the ability to connect different actors across the innovation world creates real value, nourishing an ecosystem of connection and fast interaction with new ideas. The whole industry needs to look again at the value streams waste flows create and upcycle them into new opportunities, getting solutions for our needs.

With specific reference to the issue of leftovers and food waste, one of the best practices suggested by the speaker has been re-valuing what we have. This consideration starts from the importance of the nutrition levels of food rather than its shape or type. Ugly leftovers as well as peels, traditionally discarded despite their nutritional levels (especially peels rich in minerals and vitamins), are exactly the areas where the shift in mindset is most urgent.

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## Adam Lyle

Executive chairman,  
Padang & Co Pte Ltd;  
food innovation and  
creativity catalyst

## Food for all! We need a systems-thinking perspective



An inevitable consequence of the economic crisis we are facing is the decrease in investments on major companies' innovation agendas. The main challenge will be for start-ups and research and development departments to come up with new ideas and to spot the changing opportunities to attract investors. The truly purpose-driven companies that understand what they must deliver will continue to invest and they will see new opportunities in this tipping situation.

The supply chain is what is going to be impacted most. We might see more opportunities in automation activities around agri-tech and storage techniques. In this widespread engagement, the government has to collaborate with the private sector, and start-ups have to be matched with large corporations to help them accelerate sustainable growth through the lenses of different innovation techniques.

As Valerio Nannini stated, Singapore is exploring innovative ways for increasing local food production. The local food system is challenged, but according to Adam Lyle, providing nutritious food is crucial in this discussion and, as of today, it is a topic not adequately considered. We need a systemic view of food. To move in this direction, we must start from the beginning of the food system and consider what farmers are growing, why so much food is used to feed animals and the importance of nutritious food.

People need to be nourished in a way that favours and works within the boundaries of the planet and that's where we need to be going. Lyle also raised the issue of food waste management and the real opportunities it provides. While experiencing the COVID-19 pandemic, there has been an increased mindset towards the value of food and waste in our homes. From a social behavioural perspective, people have increased their experiences associated with food, reevaluating the time spent cooking as a social and entertainment investment. We should use this rediscovery to incentivize the usage of food more efficiently, supporting people in changing their mindsets. Likewise, smallholder farmers need better supply chains to ensure a constant connection with markets and customers. Understanding that the whole food chain requires deep changes is the first step towards letting systemic thinkers design new mindsets, where all the C words (co-design, co-creation and collaboration) play a pivotal role.

> Food: Affordable, nutritious and sustainable. For all mankind. Not a dream, an imperative! <



## Highlights

- The food system has to be considered holistically, aggregating different actors and good thinkers in the food debates on shared platforms to lead towards innovation.
- It is fundamental to re-value food as a nutrition source, engaging in an upcycling vision.
- Empowering the local food market while ensuring adequate nutrition levels is a crucial point in the challenge of a local food system.



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SESSION

08

UNITED ARAB  
EMIRATES  
AND BAHRAIN

10.30 hours [GMT]

14.30 hours in Riyadh

13.30 hours in Bahrain



CLIMATE-SMART ECOSYSTEMS

# Changing food systems through people empowerment: two case histories from United Arab Emirates

Tarifa A. Alzaabi

P x 3 = 4 Earth: planet, people and prosperity for Earth

Hashim Hussein

Developing agropoles: from farming to agro-processing

MODERATOR | **Claudia Laricchia** | Head, Institutional Relations and Global Strategic Partnerships, FFI





**MODERATOR | Claudia Laricchia |**

Head, Institutional Relations and Global Strategic Partnerships, FFI

This panel showcases two prime examples of how institutional commitment, through technological adaptation and people empowerment, acts for food security in developing countries and for the promotion of agro entrepreneurship.







**Tarifa A. Alzaabi**

Deputy director-general,  
International Center  
for Biosaline Agriculture  
(ICBA)

## P x 3 = 4 Earth: planet, people and prosperity for Earth



Smallholder farmers make up a large share of the population in marginal environments – areas of the world with serious biophysical and socioeconomic constraints – and produce most of the food. Their livelihoods heavily depend on agriculture. But poor soils, inadequate quantity and quality of water, and unfavourable climatic conditions make farming difficult and sometimes impossible. What is more, the limited land and water resources are degrading, including declining soil fertility and salinization.

The ICBA takes a holistic approach to these challenges: P x 3 = 4 Earth. The formula concept includes three key variables – the planet, people and prosperity – and their relationship with Earth as our home.

The ICBA focuses its efforts on communities in different parts of the world. At the planetary level, the centre works to preserve agrobiodiversity, promote crop diversification and, thus, climate-proof food systems. At the human level, ICBA helps to build the capacities of various stakeholders from farmers to scientists to policymakers. Special attention is paid to women and youth through programmes like the Arab Women Leaders in Agriculture and the ICBA Youth Engagement Society. Through these efforts, the centre aims to empower rural communities and farmers and help them to prosper in every way.

As arable land and freshwater resources are in short supply, every type of land and water should be put to use to meet future food demand. In fact, saline water, as well as other types of non fresh water, can be efficiently used to produce food, animal feed and biofuel and also to grow alternative crops like quinoa, sorghum, pearl millet and Salicornia. There are currently 30 000 plant species known to be edible, but fewer than 200 species have any significant production levels worldwide.

That is why ICBA focuses its research and development work on alternative crops and technologies that help to produce more food, save more resources and protect the environment.

The centre has developed and tested a wide range of solutions for different agroecosystems. ICBA has conducted applied research on using treated wastewater, saline water and seawater for food production. Our scientists have also introduced crops like quinoa, pearl millet, sorghum and Salicornia, among others, in countries in Central Asia, the Middle East, North Africa, sub-Saharan Africa and the South Caucasus. ICBA has also developed and strengthened value chains for these crops to support smallholder farmers.

> We must work with nature to find solutions to many of the world's problems. Innovation, synergy and adaptability are key elements of that. <



## Hashim Hussein

Head, United Nations Industrial Development Organization (UNIDO) Investment and Technology Promotion Offices (ITPO), Bahrain

## Developing agropoles: from farming to agro-processing



- In light of the food security challenges faced in recent years, ITPO Bahrain – in cooperation with the Islamic Development Bank and with several agropreneurs from European countries – launched the agropreneurship project.

Based on the Enterprise Development & Investment Promotion (EDIP) modality, the project encompasses technical interventions and counselling on agricultural topics to ensure the global competitiveness of local small and medium-sized enterprises through the utilization of best practice methods, advanced technologies and efficient industrial processes.

Indeed, one of the main issues of small farmers in developing countries is that they lose 30-40 percent of their produce due to limited access to appropriate facilities and processing knowledge. Therefore, the agropreneurship model has further evolved towards the incubation and development of young agropreneurs through a combination of modern farming technologies and knowledge transfer.

Additionally, the agropreneurship project facilitates financial linkages with banks, techniques for skills development from UNIDO and know-how for agriculture from other specific parties.

Additionally, the COVID-19 pandemic has presented a challenge for the region but has also identified significant opportunities for Arab countries to boost resilience and maintain food security through active development programmes of agropreneurs.

Moving forward, UNIDO ITPO Bahrain is working with the Islamic Development Bank to replicate the agropreneurship project in several other countries, given its success.

> With an estimated 150 million jobs needed in the Arab region by 2025, 50-60 percent of which are expected to be fulfilled in the agro-sector, UNIDO ITPO Bahrain is working towards boosting agricultural innovation and entrepreneurship. This need for entrepreneurship goes hand-in-hand with ensuring food security in the Arab region, as it imports millions of dollars of products every year, many of which could be easily grown and processed locally. <

## | Highlights |

- Alternative crops and water resources hold a lot of promise in marginal environments. We should consider options that have thus received little attention, especially in parts of the world that suffer from a lack of water, poor soil and drought.
- People living in marginal environments need institutional and financial support to develop know-how and tools to shift to a new paradigm of prosperity.
- Saving the planet requires farmers to have a new and more significant role in supply chains, and for youth to be involved.
- Strategic partnerships and institutional networks are essential if development and technological programmes at international levels are to be achieved.



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## SESSION 09

11.00 hours [GMT]

12.00 hours in  
Democratic Republic of the Congo

14.00 hours in Ethiopia

DEMOCRATIC  
REPUBLIC OF  
THE CONGO  
AND ETHIOPIA

PROSPERITY

Feeding the future:  
African best practicesRebeca Garcia  
Pinillos

One Welfare: supporting global challenges holistically

Filippo Dibari

Sustainable, healthy diets and food systems: fresh food voucher in Ethiopia

MODERATOR | **Sara Roversi** | Founder, FFI



**MODERATOR | Sara Roversi** | Founder, FFI

The session shared good examples of African local food projects and reflections on the need to achieve a "One Welfare world," focusing in particular on food security aspects such as sustainability, farming and climate change.







**Rebeca García Pinillos**

Founder, One Welfare

## One Welfare: supporting global challenges holistically



> Global challenges need to be addressed holistically, recognizing the interconnections between animals, people and the environment, and implementing a One Health, One Welfare approach is paramount. <

The world is currently facing complex global challenges that require a systems-based approach, involving different multidisciplinary professional groups. However, we still see examples in which some of the interconnecting elements are relegated to the back or simply not taken into account. The need to take a wide approach is even more important when we speak about food security and food sustainability, going beyond the human elements.

The concept of One Welfare describes the interrelationships between animal welfare, human wellbeing and the physical and social environments. It helps professionals understand and recognize the interconnections their work with humans, animals and/or the environment have with the wider society. It also highlights that the impact of their role goes beyond helping only one element. It can have a global impact and help others more widely.

The One Welfare framework includes five distinct sections, all of which can apply in different ways, to food production, food security and sustainability. The five sections comprise the connections between animal and human abuse and neglect; the social implications of improved animal welfare; animal health and welfare, human well-being, food security and sustainability; assisted interventions involving animals, humans and the environment; and sustainability connections between biodiversity, the environment, animal welfare and human wellbeing.

The 2020 edition of the Global Report on Food Crises notes that the number of people in crisis in 2019 was the highest in the four years of the report's existence. This reflected worsening acute food insecurity in key conflict-driven crises, and the growing severity of drought and economic shocks. Within the report, there are several examples of areas where food availability or food security interconnect human wellbeing with animal welfare and their environment: "Poor livestock body conditions and adverse weather triggered an increase in disease outbreaks among animals, leading to movement restrictions, which further curbed food availability and lowered potential earnings for agricultural households." This example shows how changes in animal body condition, an animal welfare indicator, combined with environmental changes (i.e., adverse weather), can trigger animal disease and, subsequently, a reduction of food availability and earnings for people.

Adopting the One Welfare concept within scientific and global policies would have the benefit of helping to identify interventions and outputs with added value and mutual benefit between animal welfare, human wellbeing, biodiversity and/or the environment.



## Filippo Dibari

Head, Nutrition Unit  
at UN World Food  
Programme (WFP),  
Ethiopia

# Sustainable, healthy diets and food systems: fresh food voucher in Ethiopia



> Eat whole foods,  
plant-based,  
moderately. <

In Ethiopian rural areas, chronic undernutrition rates reveal the limited access to nutritious food and diet diversity for the population, a consequence of both low income and knowledge of healthy habits. Indeed, Ethiopia has the lowest diet diversity in Africa among children under age five, and only 14 percent of children between 6 to 23 months have an adequately diverse diet. According to the mathematical modelling that WFP has developed in collaboration with the national government, one household need only spend 26 Ethiopian birr per day (less than USD 1) for an energy-only diet. For a nutritious diet, however, the cost increases to 77 Ethiopian birr per day. This is a sum that 72 percent of households could not afford.

For these reasons, the WFP, in collaboration with the national government and the private sector, has developed the Fresh Food Voucher Programme, to improve diverse nutritious diets and boost rural markets with nutrient-fresh food. Adjusted to the size of the household, beneficiaries receive an electronic voucher on their mobile phones to purchase fresh food through selected traders. In this way, WFP is able to ensure constant availability of fresh food to the population, while removing financial constraints to accessing these items. To ensure markets can keep up with the increased demand, WFP actively engages with traders to make sure local fresh food is always available. Besides access to food, the programme also includes a social behaviour-change strategy to create awareness of nutritional choices. Through cooking demonstrations and community theatre performances, it hopes to eventually strengthen the demand for nutritious food.

Launched in 2018, by 2019 the programme had already reached 21 633 households (80 percent of the target) and 101 675 people. The final aim of this project is to reach formal policies – for the government to embody this approach and hopefully spread it everywhere.

The WFP commissioned an external evaluation that recommended: consistency in timing and amount of transfers, better support in using the e-voucher, programme coordinators deployed for on-the-spot support, mobile charging facilities, expanding social and behaviour change communication to cover cooking and preservation of fresh foods, closer monitoring of markets to ensure price and quality, and work with traders in establishing mechanisms to anticipate meat orders.

## | Highlights |

- There is urgency to do everything possible to encourage One Health, One Welfare collaborations among different professional groups and sectors to maximize social benefits.
- Global challenges need to be addressed holistically, recognizing the interconnections between animals, people and the environment, and implementing a One Health, One Welfare approach.
- There are some poor realities where nutritious food is not easily accessible to all. In these situations, the work and commitment of organizations such as WFP can be crucial.



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SESSION

10

MOROCCO  
CASABLANCA

11.30 hours [GMT]

11.30 hours in Casablanca



CLIMATE-SMART ECOSYSTEMS

# Sustainable development and digital transformation: success stories from emerging countries

- Said Saghir Zarouali • Towards sustainable food consumption
- Aziz Abouabdillah • Towards digitalization of sustainable water resource management in Morocco
- Louis Bockel • Carbon emission performance as key decision-making indicator

MODERATOR | **Cristina Petracchi** | Leader, FAO elearning Academy

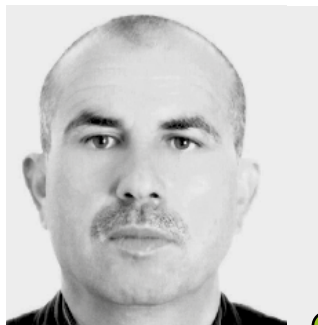


**MODERATOR | Cristina Petracchi** | Leader, FAO elearning Academy

This session illustrates some developed tools to support objectives of carbon neutrality and efficient use of water in the agricultural sector and the current situation of household food consumption, as well as the capacities of the national and local production to cover the needs of the population in basic food products.







**Said Saghir  
Zarouali**

Head, Department of  
Agriculture Programmes  
and Rural Development,  
High Commission for  
Planning of Morocco

## Towards sustainable food consumption



- There is a widespread tendency in Morocco to buy large quantities of perishable food – cereals, legumes, olives and olive oil, dried meat and fruits – despite the reduced storage capacities of households. This habit is among the primary factors responsible for current food loss and waste, and among the potential risks for food waste in the future, especially during times of crisis such as the COVID-19 pandemic. Moreover, it makes North African countries strongly dependent on foreign markets to cover 65 percent of their cereal needs.

Another actual challenge in terms of eating patterns in Morocco is linked with consumer choices: Instead of preferring locally grown foods, Moroccan consumers are grounded in massive consumption of imported cereals, which represent more than 50 percent of African imports. Morocco alone, despite its production records, imports on average almost 50 million tons of cereals, even during the best agricultural seasons – and much more during years of drought. Having the largest reserves in the Arab Maghreb, Morocco holds stocks of cereals sufficient for more than six months of consumption, not to mention the quantities stored by households.

Adapting food choices to also favour local products is a necessity that the COVID-19 pandemic has imposed. Coordination among countries in the region could have a significant impact on this issue. A study comparing the countries of the Maghreb shows that there is no coordination in the importation of cereals. A minimum level of coordination would save more than USD 15 per quintal.

Finally, it is time to pursue sustainability in consumption because natural resources are fragile, and agricultural perimeters cannot be expanded anymore. It is about rationing the resources available.

> Consuming without  
perishing. <





## Aziz Abouabdillah

Professor,  
National School of  
Agriculture of Meknes

> From now on, precise information on crop water requirements must be readily available to farmers on a daily basis for smart irrigation management. <

## Towards digitalization of sustainable water resource management in Morocco



In an attempt to save money on water, the sector that uses it the most – agriculture – is now recognizing the urgency of water conservation. Several challenges still hinder Moroccan farmers from efficiently managing water resources. First, Morocco, similar to other North African countries, suffers from water scarcity linked to climate change. There is also interest in the efficient management of water resources in agriculture, at both the plot-level and on a larger scale. Several initiatives have been developed.

→ The Green Morocco Plan, today called Green Generation, aims to accentuate the value of water in agriculture and enhance the production of good quality food, reducing food waste.

→ The National Irrigation Water Saving Programme promotes the transition from a surface water irrigation system to a more efficient localized irrigation approach.

The second challenge related to water management is linked with farmers' inability to save water and energy resources when they are available at reasonable prices.

The third complication relies on farmers' education. This is particularly evident when transitioning from one irrigation system to another. Farmers often question how and when to irrigate, and this is strictly dependent on weather conditions. Providing them with reliable, daily information on weather forecasts is necessary.

To facilitate this achievement, the Moroccan Ministry of Agriculture, Fisheries, Rural Development, Water and Forests financed the development of a smartphone application that integrates all components of the soil-water-crop-atmosphere continuum to provide farmers, managers and other potential users with precision irrigation parameters to better manage irrigation.

The system facilitates messaging, even in areas with a scarce or absent internet connection. In conclusion, this transition needs to be supported by learning programmes developed in partnership with FAO in order to fully aid and empower farmers.



## Louis Bockel

Policy support economist  
and EX-ACT policy  
and value chain analyst,  
FAO Regional Office  
for Africa

# Carbon emission performance as key decision-making indicator



Carbon emission measurements are fundamental to understanding the efficacy of a system, policy or technology in reducing emissions. It is also important to assess the available carbon stock related to forests and agriculture to better understand the amount of available natural capital.

These assessments help orient national and industrial projects to foster the transition to carbon neutrality.

The Ex-Ante Carbon-balance Tool (EX-ACT) is an appraisal system developed by FAO that provides estimates of the impact of agriculture and forestry development projects, programmes and policies on the carbon balance.

It is crucial in the objective analysis of the SDGs, and it allows the integration of climate change information into agri-food policies to guide public actions and to follow up on the Paris Agreement.

It is an Excel calculator available in 10 languages that can measure carbon dioxide emissions and sequestrations linked to a specific project for the agricultural and forestry sectors.

It also assesses eventual changes in land utilization at different levels: local, regional and national. Since its development in 2010, it has been used widely by technical agencies, partners, NGOs and banks in 80 countries.

All actors, farmers included, go beyond production analysis to understand the actual carbon footprint of employed activities. There have been sessions to explain how the tool works to educate future users. Elearning on the tool is also available in English on the FAO website.

## | Highlights |

- Lessons must be learned from the current situation dictated by the COVID-19 pandemic and to foster and empower locally-produced food consumption to reduce waste.
- Water scarcity and simultaneous inefficient use must be addressed by providing farmers with innovative methods and knowledge.
- If carbon neutrality is to be achieved, technological tools of carbon dioxide assessment need to be developed to support national policies and programmes.





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NETHERLANDS

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SESSION

# 11 ITALY ROME

12.00 hours [GMT]

14.00 hours in Rome



FOOD DIPLOMACY

## Best practices and reflections from the Mediterranean

- Andrea Carapellese • Food, SDGs and COVID-19: a holistic approach for the Earth's challenges
- Marta Antonelli • #Earthday: fixing food through healthy and sustainable diets for people and the planet
- Angelo Riccaboni • Innovation as a key driver for agri-food systems in the post-COVID scenario
- Marcello Scalisi • Academic cooperation in the Mediterranean region: UNIMED network

MODERATOR | **Claudia Laricchia** | Head, Institutional Relations and Global Strategic Partnerships, FFI







**MODERATOR | Claudia Laricchia |**

Head, Institutional Relations and Global Strategic Partnerships, FFI

In this session, specific attention has been paid to food diets in the context of the current situation in the Mediterranean region.

In this sense, experts discussed the role of the SDGs and the innovation of the agri-food system, also stressing the importance of academic cooperation, especially in the Mediterranean.





## Andrea Carapellese

Investment promotion expert, UNIDO ITPO Italy

# Food, SDGs and COVID-19: a holistic approach for the Earth's challenges



- Soon after the COVID-19 pandemic started, Andrea Carapellese created a visual map showing the cause-effect relationships between the SDGs and the coronavirus. This offered a user-friendly tool to read the pandemic outbreak through the lens of the Agenda 2030 for Sustainable Development, and to draw lessons for the future.

Global warming, the most evident manifestation of climate change, is one of the underlying factors of the pandemic outbreak, contributing to the migration of wild animals toward colder areas and increasing the risk of spreading pathogens to humans, as happened with COVID-19. But poverty is also increasing, especially for those left furthest behind or who are living in particularly vulnerable situations.

This is the case for women, who tend to be – paradoxically – the ones more closely involved in food production and the agricultural sector. They are followed closely by children, many of whom were kept out of school, the only place they could count on a daily meal, due to global lockdowns.

Last but not least, multilateralism, international trade and commercial exchanges are threatened, putting the necessary global partnerships to achieve the SDGs at risk.

The food-energy-water nexus will play a critical role in the economic diversification strategies that will have to be adopted by developing countries as part of the ongoing regionalization of the global economy.

In this context, the establishment of shorter and more independent supply chains, the development of inclusive local market ecosystems and the innovative technologies applied to smart logistics and distribution will be at the heart of developing countries' much-awaited leapfrogging process.

> Building solid partnerships through a virtuous cycle of private, academic, financial and institutional connections is crucial to achieve the Agenda 2030. <





## Marta Antonelli

Head of Research, Barilla Center for Food & Nutrition; Senior research associate, Euro-Mediterranean Center on Climate Change

# #Earthday: fixing food through healthy and sustainable diets for people and the planet



With the COVID-19 outbreak, the fragility and inherent paradoxes of global food systems have come to light. We are living through a food and nutrition crisis in which over 820 million people suffer from hunger, while 2 billion people are overweight or obese.

Clearly, diets are key leverages for improving human and environmental health: they contribute to immune systems and are important for the prevention of non-communicable diseases, which have been associated with case fatality rates of the current COVID-19 pandemic.

There are several healthy and sustainable diets around the world, consistent with traditions, culture and heritage.

The Mediterranean diet is one of them, but it has been abandoned by the Mediterranean population in recent decades. We need to go back to our traditional diet path, and Marta Antonelli provided five key recommendations to accelerate this progress and pave the way to the SDGs:

- implement bold, coherent and forward-looking policy measures across the environmental, health and nutrition, agriculture and food domains;
- ensure full coverage of social protection and food assistance programmes, ensuring healthy, nutritious and culturally appropriate food;
- create enabling environments for healthy and sustainable choices as the default choices for citizens;
- provide mainstream food education at an early age in school to maximize the role that diets play in the prevention of illnesses and diseases, as well as to promote sustainable behaviour; and
- support multi-stakeholder collaboration, cooperation and coordination as well as research and innovation on policy implementation and evaluation across food, health, nutrition and the environment.

> The time to fix the global food system is now. This is not a local, country or regional issue, this is a global call to action on which our future depends. <



**Angelo Riccaboni**

Chairman,  
PRIMA Foundation

## Innovation as a key driver for agri-food systems in the post-COVID scenario



> Technological and organizational innovations in agri-food systems are key to tackle the food and health challenges of [the] post-COVID scenario and to support economic and social recovery. <

This pandemic, and its related causes and consequences, are pushing us towards sustainable production and habits. Mediterranean diets play an important role in reshaping our food habits. But when we look at the Mediterranean countries in the past decades, problems have arisen: loss of biodiversity because of production, obesity, and malnutrition from excessive use of pesticides and fertilizers.

We need to join efforts, money and resources if change is to happen. This is exactly what the Partnership for Research and Innovation in the Mediterranean Area (PRIMA) aims to do. Nineteen countries and the European Commission put together laboratories, ideas, researchers, enterprises and 500 million euros to innovate a broken system.

It is a seven-year programme to promote sustainable farming and food value chains as well as efficient use of water in agriculture. In the first two years, 83 research innovation projects were founded, with 700 research and innovation units working together around the Mediterranean.

Some of them are projects on genotypes of wheat to understand which are more resilient to climate change. There are projects on disease-prevention in rabbits; precision agriculture (use of drones, decision support systems and artificial intelligence to manage greenhouses and water); and promoting the value chain typical of the Mediterranean area and new food value chains (i.e., the profitability for smallholders of camel milk, which contributes to social and health nutrition).

If we really want to tackle the global challenges and we want to have a more prosperous, healthy and sustainable future, we need to work together on research generation.



**Marcello Scalisi**

Director,  
Mediterranean  
Universities Union  
(UNIMED)

## Academic cooperation in the Mediterranean region: UNIMED network



- Capacity-building, networking and education are pivotal ingredients to working on a model that could make our current reality obsolete. Many countries, students and universities are not digitally or technologically equipped to ensure deployment of remote activity. UNIMED works as a network of 133 member universities from 23 countries promoting collaboration among higher education institutions across the Mediterranean region.

The goal is to enhance institutional, economic, cultural and social cohesion in the area, especially in the southern countries that lack concrete forms of regional cooperation and integration. UNIMED developed more than 30 projects financed by the European Commission, with the involvement of many institutional partnerships.

The primary priorities are to reform and innovate the education system through e-learning methods. Speaking of curricula development, UNIMED contributes sector-specific, joint master's programmes, such as a joint master's in both agricultural and hydrological research.

Among the launched subnetworks, the one dedicated to food and water follows the PRIMA programme and involves 30 universities, cooperating for capacity-building and to launch common research initiatives.

UNIMED invites European universities to provide southern Mediterranean universities with the capacity to adapt their programmes to some particular project initiatives or priorities. International student mobility is a key issue in the COVID-19 situation, and UNIMED asks for members to discuss and respond to specific initiatives, to keep alive the Mediterranean Erasmus generation during this crisis.

> We, as UNIMED, are convinced that we have to live this destiny together, hand-in-hand, thus creating the vision of a Mediterranean region, promoting a new Erasmus Mediterranean generation for peace and prosperity. <

## | Highlights |

- Education is the critical word: We have to move from a me-culture to a we-culture to create a new generation of conscious and responsible eaters.
- Innovation: Traditions are important, but they are not enough. We need to tackle obesity and malnutrition, updating processes and education to support change.
- Partnership: We need to share innovation to put humans at the centre. A collaborative attitude is part of the DNA of Mediterranean countries.



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SESSION

12 CENTRAL  
EUROPE

13.00 hours [GMT]

15.00 hours in Central Europe



PROSPERITY

## #goodaftercovid19

Kim Polman

Jonathon Porritt

Carlo Giardinetti

Fishbowl discussion

MODERATOR | **Carlo Giardinetti** | Dean, Executive Education and Global Outreach  
at the Franklin University Switzerland



**MODERATOR | Carlo Giardinetti** | Dean, Executive Education  
and Global Outreach at the Franklin University Switzerland

Starting from understanding the last 50 years of Earth Day, this session focused on identifying and selecting the “seeds of goodness” after COVID-19. Through a fishbowl discussion, the session also talks through the tipping point theory and tries to answer the question of how to gather 20 percent of the population, the number of changemakers needed to create a better world. As we approach this post-COVID time, how can we rebuild, but better, and avoid making similar mistakes?







## Kim Polman

Co-founder and chair,  
Reboot the Future



The first Earth Day in 1970 is often considered the beginning of the modern environmental movement. For decades, factories turned out pollutants, and extracting and exploiting happened without fear of consequences.

All of this was considered a minor side effect of prosperity. It was all worth it for the economic growth and improved living conditions. In 1962, which powerfully linked public health with pollution and the concerns for all living organisms. As she did, others rose to shake the consciousness and, thus, Earth Day gave a voice to the people that were concerned about all of these consequences.

It is difficult to imagine, in today's partisan political climate, that Earth Day was actually a bipartisan effort, uniting Democrats and Republicans in the United States of America. Back then, 20 million people took to the streets, not only youth but also lawyers, businessmen and government representatives.

This led to the establishment of the Environmental Protection Agency and corresponding environmental legislation.

> The real learning narrative that will emerge from COVID-19 is about what we need to do to sustain the new societal, community-based mutuality and democratic energy that have come forward in this crisis for human kind. <



## Jonathon Porritt

Co-founder,  
Forum for the Future



- After 50 years of Earth Day, and in the middle of this pandemic, the true question is whether we will be able to ensure a blue-sky recovery. Building positive recovery scenarios is a fascinating and challenging area and several good practices, such as devising thousands of kilometres of cycling paths in Milan, Bogota, New York and other cities, are great examples of seizing the moment for change. As of now, politicians working their way into the response to the climate emergency are using a good recovery narrative from COVID-19 to help achieve synergistic outcomes.

A certainty is that most of our economies are in a state of shock and the damage is going to deepen, so one priority for worldwide governments is how to get our economies back into a viable level of productivity. If governments are willing, they can intervene in this crisis while also addressing climate emergency. The only way to assure a good recovery is to plan impactful interventions in the short term while building a proposition for longer-term transformation, absolutely prioritizing solutions that are synergistic with addressing the climate emergency.

A critical issue is that, as Kim Polman pointed out in her introduction, there is no bipartisan effort in facing environmental challenges, at least at the national level. That is why routing out those autocratic sub-totalitarian political systems is going to be a crucial part of the coming recovery process. Relatively newfound but deep awareness about the climate emergency plays an important role.

Drawing on the incredible achievements of 2019, the climate movement came of age primarily due to young people: 7 million youth activists on the streets in different cities around the world – something that is not going to disappear because of this break. Young people have the agency to make the change happen, but we need to empower them into organizations and businesses rather than only look at them in a rhetorical way.

According to Jonathon Porritt, our commitment and determination, as civil society and governments, needs to be at the highest possible level to tackle the neoliberal “dark voices” of society that will use their power, not to allow a good recovery, but to take us back to the roots of the current situation.

What is the vision that will embrace this kind of pivot? Towards what are we pivoting? Where should we shift our gaze as we look toward a brighter future? These are some of the questions addressed by Porritt. The real learning, the narrative that will emerge from this crisis, is not only about technology, but about how to sustain some of the new community and democratic energy that has come forward in this human crisis – a sense of mutuality and solidarity and reciprocity between people. We need to build a strong social justice element in the recovery strategy, and the nature of how we work and live with each other will emerge as the narrative after COVID-19.

> If we try to build a #goodaftercovid19 recovery strategy that does not put the lives and interests of people who feel incredibly vulnerable, economically and socially, at the heart of our actions, we are going to lose every single battle. <

## FISHBOWL DISCUSSION



### Carlo Giardinetti

Dean, Executive Education and Global Outreach at the Franklin University Switzerland



- In all the darkness of this historical moment, there is the opportunity to work actively, as a group of committed people, to tip the world towards a better future.

Many of us know and believe that 20 percent of the population is the necessary mass to reach a tipping point, to shift the paradigm. This big shock and the vulnerability that the virus has brought to humanity seems to be the magnet that could bring together and galvanize that 20 percent.

**What are the actions and initiatives that we can implement to make the change happen?**

> Even when eating alone, we are part of an experience that includes dozens of past, present and future interactions. It is one of the most social and natural actions we do every day. Yet in some parts of the world, we are doing it in a disconnected manner, almost like a mindless action. This marathon brought me back to the awareness of how complex, rich and rewarding is the experience around food and meals. How many people and lives - as well as how much generosity from Mother Earth - are involved within a single meal experience. We have connected with the whole world, across generations and in harmony with nature over an exciting 24-hour journey. I will carry this journey with me, and use it as an example for my kids. There is a marathon behind every meal we consume, and we should treasure every moment of it. <



## FISHBOWL DISCUSSION

**With these reflections, Carlo Giardinetti began the fishbowl discussion that hosted participants from different European countries. Hereinafter are the main points of discussion.**

### Reciprocity

A shift is needed in our economic mindset towards a caring economy, bringing caring as a currency into the economic equation.

There are several companies already acting in this direction, embracing the ethic of reciprocity and the golden rule: treat others as you want to be treated. It is a mindset for generating economic value out of the ethical values of the enterprise, adding a free-of-charge service as a gesture of care and mutuality towards consumers.

This approach allows the receiver to acknowledge the added value and the ethical commitment of a firm.

### Hubs

It is fundamental to create city-learning hubs to help build a city's social-economic infrastructure through new processes and to bring systems together. SDG CoLab is working on this project, focusing on secondary cities.

Eager to succeed, they offer more open spaces to innovate. It is essential to include the youth in these learning hubs. It takes time for the people in the city ecosystem to understand the intentions of such projects, but in the end, they can fully engage with them.

### Networks

Over the past few years, studying and learning hubs have spread everywhere, but often they are like bubbles, not a part of any network. It is crucial to ensure that these hubs are open enough to be interconnected.

This is a fundamental step if we want a true chance for salient transformation. Likewise, thousands of people and organizations are committed to change, but they are incredibly scattered, and local networks are not always easy to build.

> What are the actions and initiatives that we can implement to make the change happen? <

Carlo Giardinetti

> What is the vision that will embrace this kind of pivot? Towards what are we pivoting? Where should we shift our gaze as we look toward a brighter future? These are some of the questions addressed by Porritt. <

**Jonathon Porritt**

There is a need to catalyse place-based transformation projects in which there is a critical mass of change leaders collaborating and learning to thrive together. At the local as well as global scales, we want to establish a geopolitical context built on confrontation and solidarity so that civic initiatives can move and reach across boundaries.

### Remote

One big systemic change that has happened during this pandemic is the remote management of many aspects of our daily life: remote meetings, remote working, remote leaderships, remote learning, etc. Remote platforms provide us an opportunity to use social media for good. We need to be working on the advantages and disadvantages of remote working, how to overcome the disadvantages, what kind of leadership and systems we need to maximize the effectiveness of remote working, and so on.

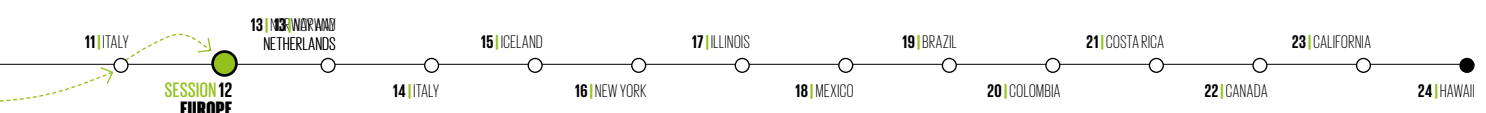
### Strategy

This is the fastest and the greatest transformation we have experienced in our society and, despite this, there is huge pushback. As much as we believe there is a growing consciousness around communities and readiness for transformations, the incumbencies of the past continue to exist, and they will continue to push back, with politicians advocating “business as usual” as the only way forward.

> For decades, factories turned out pollutants, and extracting and exploiting happened without fear of consequences. All of this was considered a minor side effect of prosperity. <

**Kim Polman**

This is the time when we, as a community, as leaders, need to be more strategic, shift from ego-system to eco-system, figure out our greatest value-add, discover how to fund organizations that can shift things at the local and national levels, ensure we have the right discussions, advocate at the right time with the right people – whether it is people in the streets or people whispering things to the right decision-makers. This means that we have to plan well and be effective in the way we go forward.



## | Highlights |

- There is a need to engage and empower youth, and to make the whole situation intergenerationally-managed. It is always good to bring people with fresh ideas, the beginners' minds, to develop new solutions.
- We need good strategies to mobilise and galvanize our energies for good and activate the massive networks of people already acting.
- #goodbeforecovid19 can be activated in the recovery strategies for #goodaftercovid19. The necessary 20 percent is already reached, we just have to connect these dots.







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## SESSION

13 NETHERLANDS  
AND NORWAY

15.00 hours [GMT]

17.00 hours in Netherlands



FOOD IDENTITY

# Inspirations from parks to forks and beyond

Sara Gentilini • Magma UNESCO Global Geopark, the GEOfood concept and related SDGs

Peter Klosse • The role of TASTE in food systems transformation

Hans Steenberghe • Which powerful food narrative will shape our future?

MODERATOR | **Auriane Borremans** | Founder, Eatention







MODERATOR | **Auriane Borremans** | Founder, Eatention

The session collected reflections from different countries and perspectives, discussing the value of local food communities, tastes, food inspiration and consumers' behavioural changes due to the pandemic.







## Sara Gentilini

Project manager  
and GEOfood funder,  
Magma UNESCO Global  
Geopark

# Magma UNESCO Global Geopark, the GEOfood concept and related SDGs



- Global Geoparks, established in 2015 under the UN Educational, Scientific and Cultural Organization (UNESCO) framework, are single, unified geographical areas where sites and landscapes of international geological significance are managed with a holistic concept of protection, education and sustainable development. Their bottom-up approach of combining conservation with sustainable development while involving local communities is becoming increasingly popular.

GEOfood is a brand for local producers and restaurants within UNESCO Global Geoparks territories, owned by Magma UNESCO Global Geopark (Norway).

The brand aims to strengthen the connection between the uniqueness of the Geopark's geological heritage and raw food material in order to regenerate rural areas through their natural heritage resources. It is a brand for supporting local communities and sustainable agriculture, involving small to medium enterprises in a common project. Its aim is to contribute to healthy and sustainable diets, more resilient inhabitants and more responsible eaters.

Through the GEOfood manifesto, members commit to specific rules of conduct that guarantee the use of local raw material, the labelling of products in connection with geological heritage, the absence of pesticides or chemicals, etc.

GEOfood can play an important role in the COVID-19 situation, supporting local food and zero-kilometre chains that can provide support to cities and towns and increase the relationships between local producers as well as local inhabitants. Indeed, there are certain rural areas that are receiving food directly from farmers. So far, at least 40 local producers and 50 restaurants have labelled their products as GEOfood with their corresponding location.

> Geoparks are about  
people and local  
communities. <



## Peter Klosse

Professor and founder,  
The Academy for  
Scientific Taste  
Evaluation (TASTE)

# The role of TASTE in food systems transformation



After World War II, production intensified to end poverty and hunger. Varieties and production methods were selected on yield and based on the demands of the food industry and retail. Taste has not been among the criteria that has shaped modern agri- and aquaculture, because of the idea that with synthetics, additives and sugar, we could always add taste.

That is how we started to grow cheap and tasteless commodities, and this led to the current situation, in which farmers are impoverished and only 30 crop varieties produce 97 percent of all consumed calories.

This is an aspect that is rarely mentioned in food discussions, but reinstating taste would enable farmers to earn a better income and distinguish themselves. Governments could take the role of facilitating the transition, helping farmers, inspiring education, using subsidies to make better food more affordable, and putting taxes on less desirable food. Taste and nutrients must be part of the desired transition, they are essential to a better food system.

A big challenge is how we can have a better understanding of "liking" and "deliciousness," in order to make these instruments for a better future. This is the aim of the TASTE foundation. Several good initiatives are already spread around the world. The state-run Japanese kyushoku system provides meals based on fresh ingredients to school children from kindergarten to junior high school, and combines them with nutritional education.

The Waste Factory in the Netherlands turns food that would normally be wasted into tasty products (like soups) to be commercialized. We need to empower, inspire, educate and facilitate people in sustainable breeding grounds: kitchens, farms, local governments and innovative research labs.

> The better foods for people and the planet must be at least as convenient, affordable and tasty as the foods that we ask to give up. <



## Hans Steenberg

Trendwatcher,  
Food Inspiration  
magazine

### Which powerful food narrative will shape our future?



To understand how food values and functions are changing, Hans Steenberg illustrated the Foodlov model. Inspired by the Maslow pyramid, it reflects the values and attributes ascribed to foods and is also an evolutionary path that society can walk on the way to forming a food culture. At the base of the pyramid, the purpose of food is to provide fuel for our body to function, while on the second level, food evolves from a nutritional to a healing function - food as medicine.

The third layer is the ethical value of food, the consciousness that the way we eat impacts the planet. The fourth layer is identity and lifestyle, food as a status and a catwalk of conscious taste. The top layer is food for reconnection and is the most important one and, at the same time, the one under the most pressure.

The COVID-19 shutdown reshaped the pyramid, and the bottom layer has become much more important (food security and food safety), and everything on top of it is less relevant. It is uncertain if this historical momentum will be used to balance ecology and economy. But, fundamentally, the right information should be spread to everyone that can cast a vote.

What we are expecting is a battle of narratives: Which powerful narratives will emerge from this crisis and shape our future? Certainly, a challenge comes from the increased attention to hygiene, which could lead companies to use this fear of contamination to push forward more ultra-processed, sterilized products.

If we want to continue to move towards a healthier and more sustainable food system, then finding enriching inspiration and disseminating reliable information is critically important.

> Feeding souls is just as important as filling a stomach. We have to repair the broken connections between food, producers, seasons and each other. <

#### SESSION 13 NORWAY AND NETHERLANDS



## | Highlights |

- We have to defend the value of the taste of local food systems, reconnecting consumers with the great food experience in restaurants and at home.
- The current paradigm supports a productivism approach, while the people and the planet need an approach based on quality.
- We need behavioural change based on a different concept and value of food, and food systems transformation, including taste, should be on top of the world agenda.







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SESSION

14

ITALY  
ROME

16.00 hours [GMT]

18.00 hours in Rome



FOOD IDENTITY

# Food for Earth: the empowerment of farmers as the keepers of creation

- Maurizio Martina • The challenge of agri-food model sustainability in pandemic times
- Giuseppe Savino • From production agriculture to relationship agriculture
- Massimiliano Falcone • From education to peer-to-peer communication: empowering climate activists

MODERATOR | **Sara Roversi** | Founder, FFI







MODERATOR | **Sara Roversi** | Founder, FFI

The session dealt with the value of food and agriculture in Italy from a cultural perspective.

Specific attention was paid to the pivotal role of farmers in the food supply chain and the main challenges they have to face, especially during and after the COVID-19 pandemic.







## Maurizio Martina

Assistant  
director-general, FAO;  
former minister of the  
Ministry of Agricultural,  
Food and Forestry  
Policies, Italy

## The challenge of agri-food model sustainability in pandemic times



In 2020, five years had passed since the 2015 expo in Milan on “feeding the planet, energy for life.” A plurality of ideas and projects on food systems have characterized this timeframe and enriched the traditional Italian farming culture. However, given the COVID-19 pandemic, they must call for a critical re-evaluation.

These unprecedented times require a renewed awareness, hopefully, one that translates into action. We need to give way to novel ideas and ways of thinking. In the context of the food system, this would mean developing a more efficient and sustainable agri model.

To accomplish this, one must be aware of the fundamental issues, to realize the optimum building blocks for a new start. This is the ground zero that, according to speaker Maurizio Martina, provides the necessary perspective on where to head next. A new agricultural and production model requires responsibility to be held both by the producer and the consumer, so as to maintain a harmonious relationship with nature.

This relationship is the cornerstone of a prolonged and sustainable food and agricultural system. We must be ready to receive these changes.

However, we must actively ensure that the idiosyncratic peculiarities of our Italian agri-food system are maintained. According to Martina, we must keep an optimistic eye and see this historic circumstance not as detrimental but rather as an opportunity for a brand-new start.

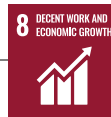
> A new agricultural and production model requires responsibility to be held both by the producer and the consumer, to maintain a harmonious relationship with nature. This relationship is the cornerstone of a prolonged and sustainable food and agricultural system. <



## Giuseppe Savino

President,  
Association Terra  
Promessa;  
founder, Vazapp rural hub

## From production agriculture to relationship agriculture



- It takes time, patience and sectoral expertise to create a sound bond with the land. Farmers develop a direct relationship with the land, but they also rely on indispensable connections to sell their products. Due to the global pandemic, they must now interrupt traditional distribution channels.

This is a context in which the concrete risks of stockpiling food surplus increase chances to generate even more food loss and waste. Farmers have to deal daily with the uncertainties of nature and are neither prepared nor ready to promptly react to the plurality of challenges linked with the global pandemic, such as adaptation to different distribution channels (e-commerce), as it goes beyond the set of skills required to be a good farmer.

Supporting farmers in activities that they cannot do would not only incentivise direct connections between food producers and consumers but would also discourage rural abandonment, frequent in southern Italy. All these considerations led to the promotion of the “adopt a farmer” initiative.

The aim of the petition is to support farmers from the bottom-up by hacking the food system as it is traditionally conceived and design methods that can incentivise consumers to buy directly from local farmers. Whether it is in the form of publishing short videos allowing farmers with food surplus to make their

products available to the general public, restoring and renovating the food supply chain, or creating new connections with the system, it is all aimed at increasing direct exchange.

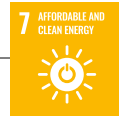
> The challenge in the coming years will not only be the production per hectare but the relationship per hectare: How many people can we make happy thanks to that hectare? Small farmers will not only have to produce but also welcome and care for people, plants and beauty. Beauty will save land and those who take care of it. <



## Massimiliano Falcone

Professor of communication for the SDGs; communication strategist, World Bank Group's Connect4Climate University

## From education to peer-to-peer communication: empowering climate activists



In 1970, teach-ins, lectures and discussions on subjects of public interest helped to educate and mobilize citizens of every background. This is how the World Earth Day event was born 50 years ago, from a young generational movement that started questioning how to behave in society while taking care of both other people and the environment.

They demanded governmental protection of land, air, water and lives. The main challenge today is that, after 50 years, the global society is still debating this topic without having moved to the next step: action.

To date, several people claiming lack of access to food are starting fires or killing wild animals to eat. This represents a context in which neither food security nor comprehensive protection of the environment is made real.

After 50 years, young generations will lead the change and create new sustainable trends. Climate literacy and environmental education are the starting points to disseminate the seeds for a better world.

Making sustainable lifestyles cool will be the key: cinema, creativity, arts, fashion, sports and celebrities can influence the beliefs and values of people and change behaviours. We need to listen and restart. A new way of sustainable and smart farming is the next step.

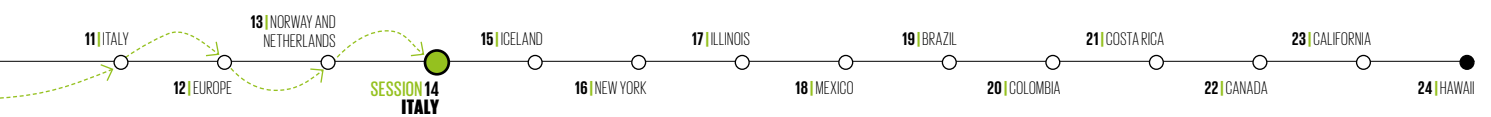
> Finally, we got it: Sustainability is the new cool. Now the SDGs are a part of our lives, and we could really start to enjoy a better Planet Earth. <



## | Highlights |

- Food production, distribution and consumption have to be at the centre of a new start that combines producers' and consumers' responsibility with the urgency of preserving our food system's uniqueness.
- Farmers are the custodians of our territories, agricultural knowledge and traditions, and need to be supported in this crisis situation to ensure the stability of their connection to markets and customers.
- Climate literacy and environmental education are key to the call to action.





SESSION

15

ICELAND  
WESTFJORDS

16.30 hours [GMT]

16.30 hours in Westfjords



CLIMATE-SMART ECOSYSTEMS

# The northern light of food innovation: success stories from Iceland

- Ingi Björn Sigurðsson • A sustainable future for Iceland
- Gunnar Ólafsson • Starting innovation from the very beginning/end of the road
- Justin Brown • An emerging seaweed and IMTA industry
- Arnar Sigurdsson • Everyone moving to cities is like gardens growing one type of plant

MODERATOR | **Gunnar Ólafsson** | Founder, Djúpið







**MODERATOR | Gunnar Ólafsson** | Founder, Djúpið

In this session, the speakers shared insights from Icelandic best practices in terms of innovation, technologies, coastal resilience and respect for the natural landscape.





## Ingi Björn Sigurðsson

Former investment  
manager,  
Nýsköpunarsjóður  
New Business  
Venture Fund

## A sustainable future for Iceland



- At the beginning of the last century, Iceland was one of the poorest nations on the planet until it began exporting its main product: seafood, in particular cod. Soon after, Iceland became a pioneer in the clean energy sector and started attracting tourists from all over the world.

Although it has been facing a lot of challenges, the country has mixed the abundance of natural resources such as hot water, clean fresh water, pure nature and blue oceans with creativity. In the unprecedented situation of the pandemic, being an isolated country is an advantage.

With a strong economy and being relatively debt-free, thinking about how to make the change and using this crisis as a turning point is easier, according to Ingi Björn Sigurðsson.

This situation creates the possibility to rethink the whole system and food in particular: food comes from the earth. It is, therefore, pivotal to rethink both the food system and the whole economy for the next generations.

As Iceland relies on an abundance of natural resources (hot water, geothermal water, clean water and the ocean), this may lead the island to becoming the most sustainable country on Earth.

> Energy transfers from one organism to another. We need to make sure that the transformation is being done as sustainably as possible. <



**Gunnar Ólafsson**

Founder,  
Djúpið

## Starting innovation from the very beginning/end of the road



- As an isolated nation that heavily relies on fish export, extractive marine practices are at the basis of Iceland's economy: 60 percent of its GDP comes from fish exports, a situation that is perfectly embodied in the expression "In Cod We Trust."

This is why the sustainability risks are particularly evident when considering aquaculture methods where the massive presence of finfish cages and the large scale of these practices are responsible for nutrient eutrophication of the sea soil. Integrated multi-trophic aquaculture (IMTA) are options that have been implemented, especially in aquaculture-reliant areas, as possible solutions.

Given the weather conditions, one of the main challenges of the food system is the difficulty for the island to grow products locally. In the Westfjords, the coldest area, only 5 percent of consumed fresh vegetables and fruits are locally produced. However, many school initiatives and programmes teach sustainable growing techniques, such as hydroponic systems, to children from a young age.

Moreover, while the Westfjords represent only 1.95 percent of the population, they hold one-fifth of the country's land area, and this implies several infrastructural challenges, such as road systems. Innovation in many sectors is required, and the government is providing a stimulus package, working together with a very progressive university.

The innovation culture has started to be part of the local communities, by incentivizing proactive cooperation between local and national governments, different companies have recently begun investing in the Westfjords region.

> We can more easily reach our goals of true growth by inspiring future generations to help in the efforts. Together we can. <





## Justin Brown

Biologist,  
Eldey Aqua

## An emerging seaweed and IMTA industry



- Eldey Aqua is a seaweed farming pioneer in Iceland, providing IMTA solutions to solve the eutrophication issue. Eutrophication, or excessive nutrient loading, can occur from the massive feeding of aquaculture fish with lower trophic-level wild fish. IMTA systems offer a bioremediation method using lower trophic level species, such as macroalgae and bivalves, to filter out excess nutrients produced by finfish aquaculture.

The systems can also disperse wave energy generated by storms that would put traditional aquaculture at risk. This approach builds upon cooperation in the local community and can redevelop coastal infrastructure, creating more value from the developed products.

It also allows new companies to enter the market as each could occupy a unique niche within the IMTA system. This collaboration reduces each company's risk since the infrastructure, gear and location can all be shared.

IMTA has to be modelled according to the local environment. This means that only native species can be used and that natural trophic level proportions are followed. In other words, lower trophic levels such as macroalgae, bivalves and molluscs need to be produced more than higher trophic levels such as large finfish.

Going one step further, local companies will begin to do their own research, introducing additional species into their seaweed farms to pull even more nutrients out of the water. IMTA can make coastal communities and their food more sustainable, and it has already been implemented in aquaculture-reliant areas.

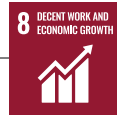
> There will be little progress if we resist natural processes. So, spend time in nature. All of the lessons you will need can be found there. <



## Arnar Sigurdsson

Founder,  
East of Moon

# Everyone moving to cities is like gardens growing one type of plant



- The Blue Bank is a creative hub in a small traditional fishing village in the Westfjords of Iceland, established to counter depopulation and loss of vitality in the community.

Like many other villages in Iceland and around the world, it faced the challenge of adapting to changes in the food systems, such as automation and centralization of the fishing industry. The concept of resilience for such villages means the ability to adapt to changes in circumstances.

But why do villages need to survive? Why can't everyone just move to the cities? It has to do with the effect of diversity on resilience. Diversity has so much to do with our ability to adapt to changes. Gardens that only grow one type of plant tend to be less resilient. One change to the garden conditions can simultaneously kill all the plants as they all have distinct ways of adapting to changes, and some of them adapt better than others.

This is why remote and rural places need to exist. They thrive via different methods, adding diversity to the human project. And it is that diversity that is going to get us through, if not the current crisis of the coronavirus, then maybe the next one. We need many modes of existing, distinct relationships with nature and each other, and we need to be wary of an urban monoculture.

> We need many modes of existing, distinct relationships with nature and each other, and to be wary of an urban monoculture. <

## | Highlights |

- IMTA is one of the most appropriate options for making coastal communities and aquaculture more sustainable. Additionally, the industry can benefit from more cooperation by introducing a diversity of species and maximizing the space used to produce food.
- Iceland faces many challenges, but through a creative combination of innovation, education and abundant natural resources, it can assure sustainable economic development.
- Small villages are treasurers of diversity, cultures and ways of living that are fundamental for resilience and, as such, they need to be protected against massive population abandonment.



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SESSION

# 16 UNITED STATES NEW YORK

17.00 hours [GMT]

13.00 hours in New York





# This macro-rich session was organized in **four parts**.

- Part 1 Feeding the planet: reflections for a brighter future
- Part 2 Food loss and waste: raise awareness for a better world
- Part 3 Food for Earth: growing healthier communities and feeding consciousness
- Part 4 Feeders of tomorrow

• MODERATOR | **Sara Roversi** | Founder, FFI

# SESSION 16 NEW YORK PART 1



## Feeding the planet: reflections for a brighter future

- Marcela Villarreal • Peace and food security in COVID times
- Berioska Morrison Gonzalez • Food security and nutrition: key pillars of humanitarian diplomacy
- Patrizia Fracassi • Sustainable food systems for healthy diets: policy dialogue during the COVID-19 pandemic

MODERATOR | **Sara Roversi** | Founder, FFI





The first part looked at the current situation from a cross-country perspective and from the sphere of policymaking. It focused on multisectoral policies, partnerships and cooperation for the mainstreaming of nutritional programmes and support of decision-makers.







**Marcela Villarreal**

Director,  
Partnerships and UN  
Collaboration Division,  
FAO

## Peace and food security in COVID times



- The 2030 Agenda cannot be achieved without peace: both a precondition for development as well as a development outcome in its own right. Food plays a crucial role in this equation, since there cannot be any peace without food security and there cannot be any food security without peace.

It is a complex relationship, not always easy to address. Exacerbating the already critical situation, COVID-19 can easily produce a major food security crisis worldwide.

After decades of decrease, the last few years have witnessed an increase in the number of food-insecure persons worldwide, as well as in the number of conflicts.

This has had direct effects on all four dimensions of food security: availability, accessibility, stability and utilization, without mentioning the risks of undernourishment, child mortality and maternal mortality. Conflicts cause an increase in food insecurity.

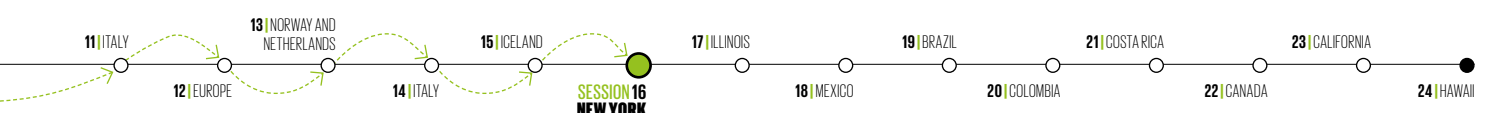
On the other side, food insecurity can cause conflicts, but not all food insecurity causes conflict. A major underlying factor is access to natural resources – such as land and water – which are fundamental for food security and may represent reasons for conflicts, especially given the frequency of extreme climate-related events, enhancing resource scarcity and competition over land use.

From this complex relationship, it is evident that food security variables need to integrate better with theories of conflict and peace programmes.

For this reason, FAO has launched an alliance in which 12 Nobel Peace Prize laureates came together to create awareness and develop concrete solutions on how to incorporate a peace dimension within food security interventions.

While helping countries to address peace, they also advocate for simultaneously tackling food security.

> Sustainable peace cannot be achieved without food security. <







**Berioska  
Morrison  
Gonzalez**

Minister counsellor  
and political coordinator,  
Permanent Mission  
of the Dominican  
Republic to the UN

## Food security and nutrition: key pillars of humanitarian diplomacy



- The WFP alerted the Dominican Republic to the risk of a hunger pandemic. Now more than ever, there is an urgency to protect vulnerable communities. The past few years' evidence made clear that armed conflict, violence, economic crisis and extreme weather events are factors behind food security and nutrition.

But they are also engines that generate, in turn, violence and conflict. To address this situation, real efforts in humanitarian diplomacy are needed to restore and maintain peace.

Among the root causes, we must take into account the adverse effects of climate change. The interaction of factors such as climate change in contexts already vulnerable to conflicts and economic crisis brings severe consequences for a civilian population.

There is not a single recipe to deal with this multidimensional situation, but it is more important than ever to join efforts. Embracing a holistic approach over peace and food security, as well as considering the plurality of factors that may exacerbate already vulnerable contexts, such as climate change, is therefore necessary.

In the Dominican Republic case, a great effort has been placed on food security. Having it in a prominent place in the national development agenda promotes agricultural innovation and intervention, and supports a culture of national production sufficient for national and export consumption.

But this is happening within a context of peace. The same reality is not possible in countries under conflict, where agricultural production is not capable of meeting the nutrition needs of the population.

> There is not a single recipe to deal with this multidimensional situation, but it's more important than ever to join efforts. <



**Patrizia Fracassi**

Senior nutrition and food systems officer, FAO

## Sustainable food systems for healthy diets: policy dialogue during the COVID-19 pandemic



> It is important that our decision-making is based on data and analysis, and that this data and analysis differentiates to really understand how each foreseen policy measure will affect the most vulnerable. <

COVID-19 is disproportionately impacting the whole food system, with real consequences in terms of food insecurity, access to healthy diets and malnutrition.

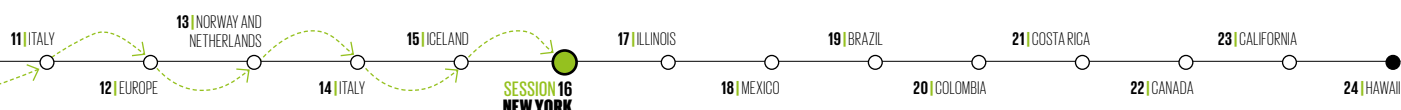
We urge all stakeholders to engage and to understand the impact on all of the food system actors (input companies, farmers, traders, food and beverage companies, retailers and consumers), and to understand how the government response is going to affect the different components of the food system. Clear messages have to be delivered for policy dialogue.

The first component is to understand that food and agriculture services are essential. It is important not to create trade and labour movement restrictions, especially on staples and other food commodities, since this would disproportionately affect those countries that depend on imports, harvest, storage and food distribution.

The second message is to protect the most vulnerable, linking producers with safety-net schemes and protecting informal agricultural workers/migrants while including fortified foods in the food-aid basket and avoiding generalized food subsidies.

The third message is innovation, in which we have seen the greatest local community responsiveness to support seasonal harvest produce. Whether it means linking producers with consumers, reducing post-harvest crop losses or improving food stocks along the value chain, or enhancing transformation and processing to reduce food loss, innovation is the key driver for adaptation and for keeping the food system alive.

These are all crucial messages and practices for a successful policy dialogue to determine aligned and coherent policies.



SESSION

# 16 NEW YORK

## PART 2



CIRCULAR LIVING

# Food loss and waste: raise awareness for a better world

Damiano Beleffi

International day of awareness of food loss and waste

Steven Finn

Rebuilding the food system for a sustainable, secure future

MODERATOR | **Sara Roversi** | Founder, FFI





This second part keeps the focus on policies and what can be done to prevent food loss and waste, the ingredients of a new, sustainable start.



## Damiano Beleffi

Ambassador,  
Permanent Mission  
of the Republic of  
San Marino to the UN

# International day of awareness of food loss and waste



The uncertainty of the COVID-19 situation is exacerbating the food system paradox, in which 820 million people suffer from hunger and malnutrition while nearly one-third of all food produced each year is squandered or spoiled before being consumed. Unfortunately, our collective response to this crisis, such as the forced closure of schools, restaurants and other organizations that serve food, has only increased the amount of food waste.

In Florida and California, farmers faced a massive surplus of highly perishable food because retailers and restaurants were not able to absorb it. In many cases, the wasted food could have instead gone to the most vulnerable.

Promoting food loss and waste awareness could help reduce and mitigate the potential negative impact on food security and malnutrition during this complicated period.

What we need now is a spirit of solidarity and friendship among nations, and a strong commitment from the UN, which is fundamental to educating new generations on this subject.

With this in mind, San Marino and Andorra led the UN negotiations on creating an international day of awareness on food loss and waste. It received more than 60 responsive countries, a positive sign of interest. Beginning in 2020, FAO designated 29 September as International Day of Awareness of Food Loss and Waste.

This is a way to sensitize the public opinion on awareness, creating synergies and momentum in the international awareness of the value of food, and promoting sustainable development action.

> The creation of an international day against food loss and waste could be the best occasion to sensitise the public opinion to the importance of the issue. <



## Steven Finn

Affiliated faculty,  
Organizational Dynamics  
programme at University  
of Pennsylvania; vice  
president of food waste  
prevention, Leanpath

# Rebuilding the food system for a sustainable, secure future



The most critical signal from COVID-19 is that it has simultaneously amplified food waste and hunger in its disruption of the food system. We now must reset, restore, redesign, rethink, reimagine and reconnect in order to rebuild the food system the right way, with a focus on people and the planet together.

We really need to address the drivers of food loss and waste not only from a moral standpoint but also from a risk standpoint, starting with reversing the developed world's culture of abundance regarding food grounded in expectations of large quantities and low costs.

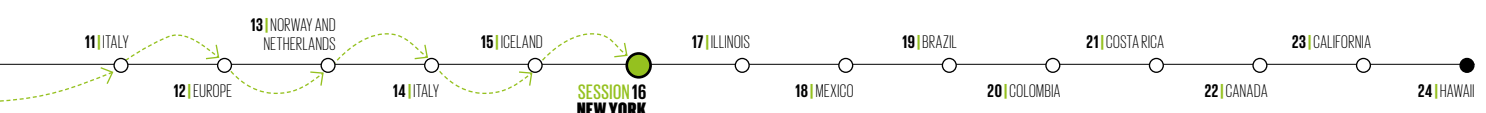
Rather than expecting food availability 24/7, we need to restore a direct connection with food, return to patterns of responsible production and consumption, and encourage new generations to question the acceptance of excessive food waste coupled with extensive global hunger.

The major challenge going forward involves a commitment to action. While we achieved some momentum on elevating the scope and scale of the global food waste challenge over the past 10 years through a focus on awareness and education, the next decade must be about effective action for food waste reduction with urgency.

We are still far from reducing global warming, and we are not on pace to cut global food waste in half by 2030.

Meanwhile, the COVID-19 pandemic has been disrupting our systems, our lives and our priorities. We must ensure that this period of retrenchment does not wipe out the years of gains we have made in advancing sustainability initiatives, especially regarding food waste reduction.

> We must embrace the opportunity from COVID to quickly rebuild a truly sustainable food system, or accept the likelihood and cost of future pandemics. <





SESSION

16

NEW YORK  
PART 3

PROSPERITY

# Food for Earth: growing healthier communities and feeding consciousness

Stephen Ritz

Growing something greater!

Robert Graham

Food as medicine

MODERATOR | **Sara Roversi** | Founder, FFI



The third part of the session moved from the policy and institutional dimension to stories of ground actors, focusing on the concept of food as medicine and as a vehicle to grow healthier and more inclusive communities. Equally, the session also considered the power of education.



## Stephen Ritz

Founder, Green Bronx Machine; educator, urban farmer and Food Tank Hero

## Growing something greater!



South Bronx is the poorest congressional district in the United States of America, and COVID-19 disruption made the situation even more dramatic. People and families do not have devices or access to the internet for home-schooling.

Supermarkets are closed for fear of COVID-19 and people are literally shopping in gas stations, buying a month's worth of groceries and packed foods there.

The health and awareness gains made are systematically being destroyed as we continue to devalue the most vulnerable and those who are on the front lines.

Hopefully, through this crisis, people will learn the importance of eating more locally and will get closer to knowledge about locally-produced food.

But this will only happen by encouraging a return to local food through education. We again need to teach students and their parents how to grow food within their homes, to embrace seasonal cooking, organic cooking and simpler cooking, together with healthier food habits.

And this is exactly what Stephen Ritz and the Green Bronx Machine is putting in place; teaching, talking, communicating and creating not only a wave of awareness but a practical approach for change.

Through a fundraising project selling t-shirts, Green Bronx Machine purchased a truck full of fresh food to deliver groceries to the most vulnerable citizens in the Bronx. We need lots of acts of empathy, compassion, resilience and hope.

> The most important school supply in the world is food - especially if you don't have it! <





## Food as medicine

### Robert Graham

MD and chef;  
co-founder,  
FRESH Med NYC and  
FRESH MED U



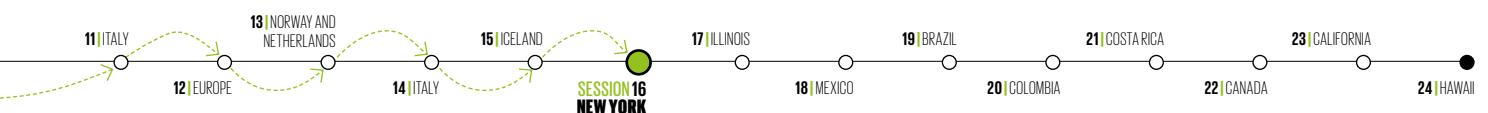
- Without health, there is no wealth. As stressed by Dr Robert Graham, an important factor to consider is that 94 percent of people with severe COVID-19 illnesses have one of four chronic diseases that are reversible and preventable by adopting healthier lifestyles.

For example, obesity not only represents a major health issue but is also the number one risk factor for severe COVID-19 symptoms. It is clear that when it comes to health and human survival, food plays a pivotal role: it is a medicine and should be treated as such to grow healthier communities.

According to Graham, the main problem of our medical system is that it fails to be a true healthcare system, only addressing sickness, without focusing on health and prevention. Healthcare starts with self-care, and this is how the FRESH acronym was created, to indicate the ingredients for health: food, relaxation, exercise, sleep and happiness.

Once these five ingredients are established as essential to a healthy life, medicine takes a secondary role. We need a FRESH start! Let's take our health into our own hands and require a systemic change in the way we live food and health. Healthy people need a healthy planet, and a healthy planet needs healthy people.

> Let food be thy medicine, and medicine be thy food. If the food is meatless, even better. <



SESSION

# 16 NEW YORK

## PART 4



FOOD IDENTITY

# • Feeders of tomorrow

Alessandro Schiatti

• Food is a love story

Tret Jordan

• A belief in sustainability and the support of local producers

• MODERATOR | **Sara Roversi** | Founder, FFI



This last part of this session focused on the importance of quality food in hospitality and social services. Here, chefs have taken the lead, sharing their insights on the future of food services and their role in reinforcing community-building, taking into account the cultural side of food.





## Alessandro Schiatti

CEO, I Love Italian Food

### Food is a love story



Italian food is everywhere in the world, and I Love Italian Food is the biggest community of Italian food lovers, chefs and producers, created to promote, protect and bring the Italian food culture across the world. In the current COVID-19 situation, producers and farmers, the ones who preserve the biodiversity of our cultural and food identity, are struggling to reach markets and consumers.

The entire food industry has been disrupted. Chefs and restaurant owners are fighting not only for their businesses, but also to preserve one of the biggest cultural and manufacturing heritages. This heritage makes Italy a worldwide centre of excellence for food and dining.

Despite this being the worst period in recent decades, the Italian food chain never closed during this moment of emergency – all Italian food companies have continued to produce food.

This led to Support Italian Food Warriors, a temporary project launched first in New York by I Love Italian Food to support the authentic Italian chefs and restaurant owners in Italy and around the world. It consists of a digital platform

to offer all restaurateurs the chance to talk with their customers, building a new culinary experience that will enable them to raise moral and economic support in an immediate, direct and concrete way.

Through online masterclasses, restaurateurs can share the secrets of their dishes with clients and all Italian cuisine lovers, collecting a financial contribution that each restaurateur may use to support their businesses or donate to charitable causes that matter to them.

> We Italians, as you know, are linked to food and cooking by a special relationship. For us, food is a daily love story, and it identifies us. For us, eating is an attitude, a lifestyle. It represents the culture of our country and our ancestors. This is why it is unthinkable to make an Italian recipe without starting from authentic Italian raw materials, products that bring with them the passion, love and the know-how of an entire people.” <



## Tret Jordan

Executive chef  
and climate shaper

# A belief in sustainability and the support of local producers



- In Canada, the growing season is quite short, meaning that a great part of consumed food products are typically sourced from foreign markets.

This critical situation and challenge that the whole food system is facing raised many questions and concerns from consumers.

They started questioning their food sources and how it is being processed and packaged. This curiosity is happening from chefs' perspectives as well, with many pondering solutions to the food sector challenges.

A discussion in the chef community has begun to find better practices for a better restart.

The Chefs' Table Society of British Columbia, of which Tret Jordan is a member, began questioning the local challenges to develop solutions for increasing consumers' awareness and changing habits and behaviours, starting with their businesses.

We need simple educational changes for future generations of chefs and cooks to learn how to construct a menu in a sustainable and reasoned way, instead of only teaching them to choose the valuable ingredients of Michelin chefs.

> Respect for food is a respect for life, for who we are and what we do. <

Thomas Keller

## | Highlights |

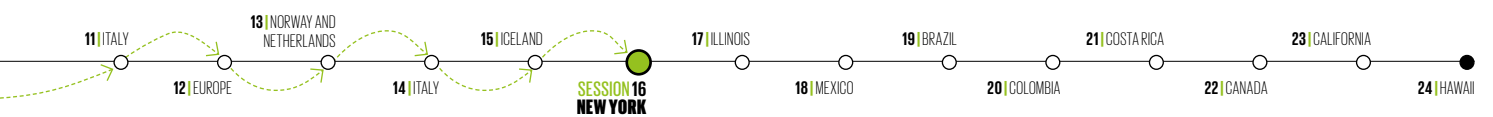
- Conflicts, food insecurity and access to natural resources are deeply interconnected, and humanitarian diplomacy plays a fundamental role in addressing food issues in conflict resolutions.
- Decision-making must be based on data and analysis. The responsible engagement of all food system actors, including consumers, could bring innovation and opportunity.
- Awareness of food loss and waste is needed to maximize solidarity, and the education of kids and families needs to be supported now more than ever.
- Humans need the guidance of thoughtful doctors, and we also need people that can advise industries to rethink the system.
- The change has to come from leaders and industry to reshape the food chain. We need to preserve the value of identity and culture. Through food, we celebrate, we care and we give love. Food is not just a commodity, it's a way to take care of society.
- Food is medicine and should be treated as such.
- Food feeds our soul and relationships. Preserving the experiential role of food is as important as the supply chain.







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SESSION

17

UNITED STATES  
ILLINOIS | CHICAGO

19.00 hours [GMT]

14.00 hours in Chicago



PROSPERITY

# Food for Climate League

Eve Turow-Paul &  
Sophie Egan

Food for Climate League: leading a new food and climate narrative

Lisa Feldman

The importance of building a common climate-friendly language for business and eaters

Dorothy Shave

Working together to make good food desired food

MODERATOR | **Sara Roversi** | Founder, FFI





MODERATOR | **Sara Roversi** | Founder, FFI

The session focused on changing the narrative and communication about climate-smart eating, to make a healthy lifestyle more appealing and engaging.

What are the barriers to behavioural change?

What are the solutions?

These are some of the questions addressed, speaking of food and climate, and how we can begin with our actions as consumers and food makers.







**Eve Turow-Paul**

Founder and executive director, FCL



**Sophie Egan**

Director of strategy, FCL

## Food for Climate League (FCL): leading a new food and climate narrative



Climate-friendly eating has yet to break through into the zeitgeist. Why is that? First, connecting climate issues to food choice is uniquely difficult. It requires explanations of complex agricultural systems and highlights emotionally-charged topics of climate change and personal food choices. Second, most companies and campaigns have gotten the messaging all wrong. Many climate initiatives aim to galvanize action through education and fear-mongering. But information alone does not create behaviour change, and frightening statistics can trigger feelings of guilt and anxiety that cause people to shut down. Further, climate-smart eating is often framed in the negative, or as an all-or-nothing command: zero-waste lifestyles and veganism, for example. This approach has made climate-smart eating seem unappealing and unattainable to many, who feel they need to give something up to participate. In the same vein, these messages often speak to an elite audience motivated by a desire to make an impact, instead of showing people how climate-smart eating can also meet more basic human needs like feeding their family on a tight budget, the need for good nutrition, and even social approval and belonging within their community.

How do we democratize sustainable eating and catalyse critical shifts in our food system? We need to reframe climate-beneficial eating, make it easy and alluring to participate and make these habits relevant to all people. Food for Climate League works under the belief that we can galvanize interest, avoid common emotional triggers and empower eaters by celebrating the beautiful array of affordable, delicious food that's great for us and the planet.

We should approach food and climate communications with the assumption that everyone cares about the climate crisis, that they're informed enough to act and that we don't necessarily need to bring up the climate in order to guide people to climate-smart behaviours. Instead, we can accelerate a climate-beneficial food movement by highlighting all we have to gain by eating in a climate-smart manner and creating new avenues of engagement that go beyond the current niche sustainability market. Connecting climate-smart eating with basic human needs for safety, belonging and purpose can be a recipe for a new, better food culture. Let's celebrate the affordable, nutritious, artisanal, local, personal and impactful opportunities sustainable eating offers us – *all* of us.

We can create new narratives – and build on existing food trends – that will resonate with a wider population and catalyse greater impact. Through food, we can bring the climate crisis into focus as an issue that everyone can have a hand in addressing. We can, at the same time, position the food and agriculture industries as leading the charge in combating the climate crisis. We're working toward the SDGs of climate action, responsible consumption and production, and zero hunger by leading eaters toward biodiverse, less-waste foods grown in healthy, nutrient-rich soils. A more biodiverse, plant-forward agriculture system that allows plants to draw down carbon from the atmosphere into the ground could ensure a flavourful, nutritious, food-secure world. Current obsessions with new flavours, textures and varieties can be leveraged to create a new food system that prioritizes these climate-smart changes.

> We can tackle the climate crisis bite by bite. <





**Lisa Feldman**

Director  
of recipe management,  
Sodexo

## The importance of building a common climate-friendly language for business and eaters



- Despite both industry and consumers being motivated to make climate-friendly food choices, there is no universally shared language to help anyone determine the best option for the planet and human health.

As one of the largest American foodservice companies, Sodexo started working with FCL to establish a common language for communicating with both operators and consumers about climate-beneficial eating through the sharing of menus.

Having a new shared language about nutrition is the best road map to market sustainable eating and an easy tool for the food industry.

When we started talking about healthy eating in menus, in most cases for consumers it meant to take something out of the dish, and this didn't encourage them to undertake healthy habits.

As already pointed out, we need a language that doesn't require consumers to give up something, but to celebrate food diversity and to discover food through colours, different tastes and ingredients.

FCL is looking for and spreading this new language, coming out with a new lexicon of food terms and tools for operators to be able to put out a food offer that is delicious and climate beneficial.

> We need a common language for business and eaters, similar to what we use to convey basic nutrition information like calories and fat, for climate-beneficial eating. Right now, that doesn't exist. Rather than talking about negatives and what's being taken away, the language must emphasize the positives of this eating style, such as focusing on underutilized crops and their incredible taste, vibrant colours and cultural heritage. Let's get farro out of the corner. It's delicious! <



## Dorothy Shave

Registered dietitian;  
global marketing  
sustainability lead,  
Knorr at Unilever;  
founding board member,  
FCL

## Working together to make good food desired food



- Food is life, and our choices em-dash for those who are lucky enough to have food choices em-dash reflect our life. Shifting or changing takes all the players working in partnership to move the system to enable the masses to demand better food for all. There is a need for cross-industry consistency in the cues, claims and messages about climate-friendly, nutritious food. One of the many challenges is the inconsistency in messages, language and actions taken to move toward more sustainable eating practices, creating extreme confusion about why, what and how to change for the betterment of the planet.

A solution to this is the use of creative channels to deliver consistent messages through a framework that enables all the players, from the industry to the chefs and everybody in between, to work together on a path for making food and the health of people and our planet easily understandable and desirable. With this, a ripple effect will be triggered: Consumers will want nutritious foods with a lower, or even positive, environmental impact, creating the demand that will shift the food supply.

Consistent messages and clear actions give the opportunity to the collective system to educate and inspire everybody, with the same terms and the same tools, and to make the trifecta of health, environmental friendliness and flavour come together in an understandable way to drive the demand for those foods.

We, at Knorr, together with the World Wildlife Fund, created the Future 50 Foods report to identify 50 of the exemplary foods that meet this trifecta.

It is a collection of beautiful plants from around the world that have the power to improve health, lower environmental impact and flavour-up dishes.

The intention is to make eating better food tangible by providing examples of the foods we should all eat more of and, together with chefs, making those foods the yummiest foods around. With Food for Climate League, we are working with partners to determine and create the communication framework that will enable and inspire all the players in the food world to consistently create the demand for foods that bring the trifecta of health, environment and flavour to plates.

> We are working in partnership to feed the world in a better, more nutritious and environmentally-friendly way. To do so, we will make these foods the desired foods - through delicious, inspiring communication, products and dishes. <

Changing communication and making this complex concept tangible allows us to transform the way we all think about the food we grow, subsidize, support, recommend, promote, serve and eat – together shifting and repairing the food system.



## | Highlights |

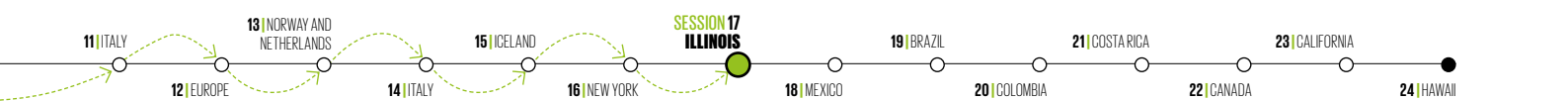
- The FCL is working to identify optimal communications tactics and avenues for engagement to catalyse a global movement toward climate-beneficial eating, not just educating but engaging.
- The link between food and climate is often difficult to understand for people because of a general lack of knowledge.
- As an additional and important barrier, people's behaviour is difficult to change, especially concerning food choices, as they represent a part of people's identity.
- It is important to change the communication about healthy and sustainable food. There is a need to highlight the positives and take advantage of and celebrate all the varieties, colours, flavours, nutrients and textures of the world's food.







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SESSION

18

MEXICO  
MEXICO CITY

20.00 hours [GMT]

15.00 hours in Mexico City



CLIMATE-SMART ECOSYSTEMS

# Sustainable practices and lessons in food systems

Kakoli Ghosh • Proven good practices for sustainable agriculture

Malin Jönsson • Maize biodiversity essential in Mexican life and culture; vital for global future food

Cassia Moraes • Coronavirus and climate change: different crises, complementary solutions

Stephen Edkins & Christian Schmitz • How blockchain boosts sustainability in the rice trade

• MODERATOR | **Karla Gonzalez Ramos** | Food Innovation Program alum; lead ambassador to Mexico, FFI







**MODERATOR | Karla Gonzalez Ramos |**

Food Innovation Program alum; lead ambassador to Mexico, FFI

The session discussed the relationship between food, climate change and the value of genetic biodiversity.

Specific attention was also paid to digital blockchain, youth empowerment, transparency and building global communities.







## Kakoli Ghosh

Coordinator of Strategic Program on Sustainable Agriculture Management Team, FAO

## Proven good practices for sustainable agriculture



Good and efficient agriculture is a prerequisite for better food systems, and good agriculture requires undertaking several good practices. Recently, FAO has been looking at land degradation, water management and agroforestry to find the best practices derived from one decade of FAO projects, a solid set of practices that have been tested on the ground and can be assuredly used to support the SDGs.

The first practice is to guarantee genetic diversity, ensuring the possibility of finding many food varieties and colours in our markets and having a diversified diet. FAO is working to ensure that countries have access to the best germplasm for breeding and growing.

The second practice, linked to genetic diversity, is to combine innovation with tradition. After all, genetic diversity is about culture, diversity and agriculture, and farmers are the custodians of such heritage. Innovation creates more value when it is shared, therefore the third practice that FAO is strongly promoting is to bring key players around the table, to create a dynamic ecosystem that encourages dialogue on different dimensions, starting from farmers' knowledge.

The fourth essential practice is to put women and smallholders at the centre of the dialogue. Without listening to the real workers, there is no possibility of making our food systems more sustainable. These practices are not complicated, but to be successfully implemented, they need capacity building and knowledge sharing.

> Best practices for sustainable agriculture require continuous learning based on ground experiences. <





## Malin Jönsson

Coordinator,  
Semillas de Vida  
Foundation

# Maize biodiversity essential in Mexican life and culture; vital for global future food



With about 64 landraces and thousands of different varieties, maize is a big part of Mexican culture and daily life. This biodiversity of maize is the agricultural heritage of small-scale farmers, which generation after generation keeps developing. For this reason, landrace maize last year was officially made a part of the human rights of all Mexican people, and this is a further step towards the protection of genetic biodiversity.

But to ensure that this heritage is preserved and that the production of maize is truly re-evaluated, the whole value chain has to take part, to differentiate it from the conventional, improved and genetically modified maize, which lacks resilience against climate change.

Mexico counts more than 700 registered dishes prepared with maize, which reflects the uniqueness of its biodiversity. It is a central resource for food habits and climate change mitigation and adaptation practices.

The Semillas de Vida foundation works to protect the maize biodiversity through characterization of all the different types of maize that, in most cases, are beyond consumers' knowledge, in order to support the diversified production of small-scale farmers.

> Thanks to the hard work of generations of small-scale farmers, today we have a vast marvellous agrobiodiversity that is essential for our current and future generations' food culture. The protection of farmers' rights to save and exchange all seeds is indispensable for its continued existence. <

Also, the foundation has implemented participatory improvement workshops, local seed banks and seed exchange markets. One of the main problems for small-scale maize producers in Mexico, especially in the south of the country, is that they do not have a direct connection with consumers and, in many cases, they are far from the market.

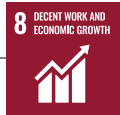
To resolve this, we have proposed the creation of a virtual barn where farmers can sell the different varieties, finally finding a market for them. These small-scale farmers need to be supported and empowered if we want to support biodiversity and sustainability.



**Cassia Moraes**

Founder,  
Youth Climate Leaders

## Coronavirus and climate change: different crises, complementary solutions



The collective, global response to the current pandemic can bring important lessons for tackling climate change and other challenges in this century.

Despite negligent actions by some federal governments, a vast majority of global and unilateral initiatives have been faster and more effective in addressing the current health crisis than those in response to the ongoing climate crisis.

Crises like this demonstrate the urgency to promote necessary transformations for our society to prosper in the 21st century.

Challenges are amplified and more complex when we are part of a global community. Youth knows best, and they are already leading the way in this transition, dedicating their lives and careers to finding a solution to a problem they did not create, but they must solve.

The Youth Climate Leaders network contributes new ideas and partnerships, as well as concrete professional opportunities and green jobs, to foster a just transition to a new climate economy.

The scientific community is offering clear warnings about what to do in the face of the pandemic and the climate crisis. Now, a final opportunity has presented itself: rebuild our society through a Green New Deal.

This is the urgency that the fast-growing child and youth-led movement for climate action demands. Understanding the risks we face as individuals, countries, companies and the world is essential to anticipating the onset and aftermath of a crisis.

The pandemic has shown that we can act quickly, promoting behaviour changes and economic activities, when there is interest from society and political will. May we know how to replicate the same formula to contain the climate crisis while there is still time!

> A final opportunity presents itself: It is clear that we cannot go back to normal, so we should rebuild our society through a Green New Deal. <







**Stephen Edkins**

CEO and founder,  
Rice Exchange



**Christian Schmitz**

CMO and head of Asia,  
Rice Exchange

## How blockchain boosts sustainability in the rice trade



The Rice Exchange digital platform is a private, permissioned blockchain framework that allows consumers and producers of rice to connect in an environment of trust and transparency. This is important as rice is an essential crop for food security, consumed by 4 billion people around the world and providing employment for 1 billion rice farmers.

The platform tackles supply chain inefficiencies and reduces the cost of trading rice, also seeking to boost food security to make it easier to manage rice procurement in times of poor harvests or natural disasters. This platform removes the many frictions in the global rice supply chain and transforms the highly fragmented international rice trade into a modern global marketplace.

The Rice Exchange is a member of the Sustainable Rice Platform and works with it to raise the profile of sustainably-produced rice. The platform allows buyers to search for rice producers that have been awarded verifiably sustainable certifications.

The rice trade faces many challenges today. Poor procedures during the processing, transportation and storage of rice can result in large quantities being spilled or spoiled. Rice makes up over half of the wasted cereals in Japan, China and South Korea, and 72 percent of lost or discarded cereals in South and Southeast Asia – a total of 149.7 million tons, according to the UN.

One of the biggest reasons for rice loss is that rice cargoes often reach their international destination with water damage.

Rice Exchange developed a loss prevention programme that includes lining the sides of containers with kraft paper and adding dry bags that can absorb up to four times their own weight. The bags recommended by Rice Exchange are biodegradable and do not harm the environment.

> Rice is the largest food item globally in terms of calories consumed and employment. We're boosting efficiency in the global rice market and reducing waste. <

## | Highlights |

- To make our food system more sustainable, we need to use traditions and combine them with innovation. We need to have more transparent and efficient systems that help us reduce food waste and enhance food security. We also need to put women in the centre and to recognize our farmers.
- The COVID-19 pandemic has taught us that sudden changes are possible when driven by the widespread recognition of an emergency and that prevention efforts must be accompanied by measures to adapt to the existing and projected impact.



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SESSION

# 19 BRAZIL CURITIBA

21.00 hours [GMT]

18.00 hours in Curitiba





# This session was organized in **two parts**.

**Part 1** • Nature-centred approach: how to balance life on Earth

**Part 2** • Social Gastronomy Movement and the importance of collaborative efforts in times of crisis

• MODERATOR | **Julia Dalmadii** | Director of community programmes, FFI

## SESSION

**19** **BRAZIL**  
PART 1

CLIMATE-SMART ECOSYSTEMS

# Nature-centred approach: how to balance life on Earth

Ivani Pauli  
Valter Ziantoni  
Paula Ponteli Costa  
Gabriela de Hass

Agroforestry and ancestralism: new ways of building our future on Earth

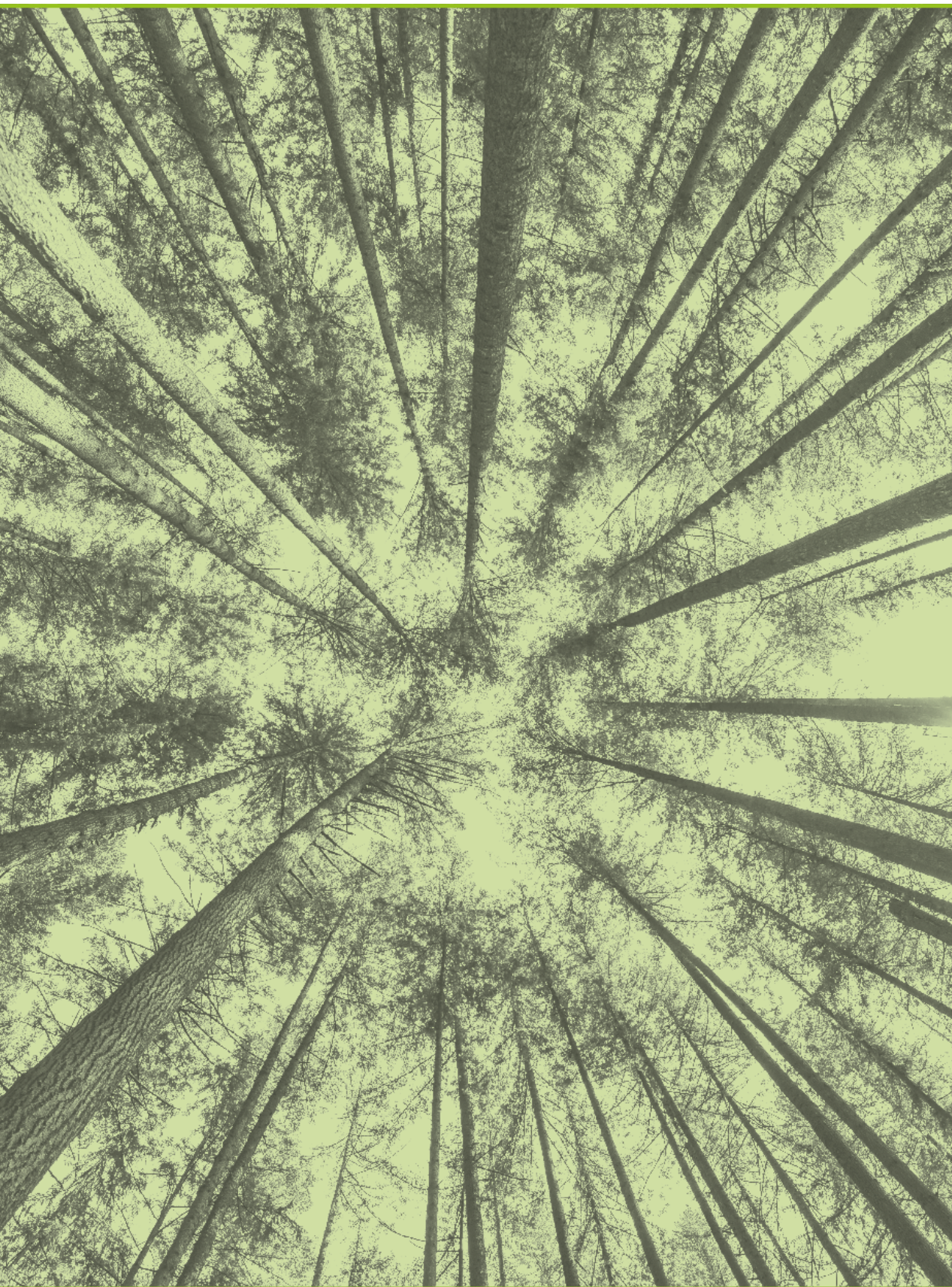
MODERATOR | **Julia Dalmadii** | Director of community programmes, FFI





The first part of this session went through the concepts of agroforestry and ancestralism as practices to rediscover the ancestral knowledge of the human-nature connection.





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**24-HOUR** GLOBAL MARATHON  
FOR SUSTAINABILITY  
**FOOD FOR EARTH**





## Rebuilding the food system for a sustainable, secure future

## PANEL DISCUSSION



**Ivani Pauli**

Biologist



**Valter Ziantoni**

Forestry engineer



**Paula Ponteli Costa**

Biologist and forestry  
engineer



**Gabriela de Hass**

Youth traveling Latin  
America to explore  
solutions for food  
production



## PANEL DISCUSSION

> The whole landscape around us is trying to become a forest again. Agroforestry encompasses millions of years of ecological intelligence and can be used as an agriculture process for regenerating soils and producing food. <

**Valter Ziantoni**

Today, we live between two extremes, in a moment of paradox. While the expectation is a biodiverse and rudimentary agricultural system centred on smallholder farmers, the reality is very large and mechanized mono-crops that are degrading the environment. We need to bridge these realities and aspirations, looking for a new way towards intentional agriculture.

Agroforestry is a solution to simple agriculture. It is a set of millenary and anthropogenic integrated production systems that replicate natural cycles or dispositions in time and space, adding perennial plants, especially trees, to pastoral or agricultural arrangements, promoting greater biological diversity and ecological resilience. Agroforestry involves a wide range of trees that are protected, regenerated, planted or managed in agricultural landscapes as they interact with annual crops, livestock, wildlife and humans. As perennial resources that help to structure and conserve the soil, trees play a crucial role in almost all terrestrial ecosystems and provide a range of important products and services to both rural and urban communities. In short, there is nothing better than a tree to simultaneously sequester carbon from the atmosphere and bring up water and nutrients from deep in the ground. This process provides a framework for above and belowground biodiversity to flourish, builds soil organic matter, offers shelter for livestock and innovates a diversified farm enterprise. Trees also make agricultural landscapes more resilient and record climate history.

> I am a food enthusiast! I do believe the way we feed ourselves can be the most effective means of building a regenerative and thriving society. By choosing to eat sustainably-grown and nutrient-rich food, we keep our organisms healthy and the entire environment, too. We empower local communities and improve smallholder farmers' livelihoods, improving the economy locally and globally. <

**Ivani Pauli**

Agroforestry consists of a combination of agricultural and forestry systems that balance various needs:

- 1) to produce trees for timber and other commercial purposes;
- 2) to produce a diverse, adequate supply of nutritious foods both to meet global demand and to satisfy the needs of the producers themselves; and
- 3) to ensure the protection of the natural environment so that it continues to provide resources and environmental services to meet the needs of the present generation and those to come.



> It's difficult to manage complexity. Agroforestry comes as a method and a solution at the same time. <

Paula Ponteli Costa

> We have to think about carbon. That's the only thing that really matters when we are trying to create sustainable impact. <

Gabriela de Hass

Although the Amazon is known to have very unfertile soil, there are some spots of dark and rich soil, which is called Amazonian black earth. This phenomenon was created thousands of years ago by the local populations that managed the forest and selected species, progressively nurturing the soil.

This is a great lesson and reason for rediscovering ancestral solutions and applying them to the future – an incredible resource. Ancestralism is not about simply looking at the past, but recovering forgotten knowledge and taking inspiration from the “technology” of the past to reconnect with nature and encourage the best out of it.

The Amazonian black soil, in Portuguese “terra preta,” offers a strong message about agroforestry and ancestralism, together with innovation and tradition. The organization PRETATERRA takes its name to spread this message and disseminate agroforestry systems on the ground. The real change happens close to farmers, in the fields and forests, and this is what PRETATERRA is about.

The organization develops replicable designs for regenerative agroforestry production systems, combining scientific data, empirical information and traditional knowledge with technological innovation, building a new production paradigm that is sustainable, resilient and lasting.

Agroforestry is a complex system and PRETATERRA came to life with the idea of spreading agroforestry practices by helping farmers to manage such complexity. This happens in the fields, implementing and planting agroforestry systems with local farmers, training them, transferring knowledge and then monitoring the daily changes.

To systematize complex, biodiverse and regenerative agroforestry systems, each component must be addressed by its functionality in the system (niche) and not as an isolated species or culture. Thus, elastic modules are created, adaptable to different contexts and replicable to various geographical regions.

They design production systems that are technically and economically viable for the farmers to know all the costs and potential profits involved. Ultimately, the customised regenerative agroforestry design conceived by PRETATERRA seeks to associate environmental and productive resilience with market opportunities and the satisfaction of conscious consumers.



## SESSION

19 **BRAZIL**  
PART 2

FOOD IDENTITY

# Social Gastronomy Movement and the importance of collaborative efforts in times of crisis

- Nicola Gryczka • Social gastronomy towards a more equitable, inclusive and innovative food system
- David Hertz • How collaborative effort can contribute to our success even in times of crisis
- Uridéia Andrade • Collaboration: the basis of success in times of crisis
- Rafael Rincon • Ñam: let's change the world by eating!
- Paola Pollmeier • Breaking down borders and fighting malnutrition with Platos Sin Fronteras

MODERATOR | **Julia Dalmadii** | Director of community programmes, FFI



Through the stories of various local initiatives trying to regenerate the planet and foster resilience in local communities, the second part of the session starts in Brazil and travels across many South American countries, arriving in Colombia.





**Nicola Gryczka**

Co-founder,  
Social Gastronomy  
Movement

## Social gastronomy towards a more equitable, inclusive and innovative food system



- The Social Gastronomy Movement (SGM) works towards unleashing the collective intelligence of its global community of social change makers to address social inequality across the food cycle and to engage people to leverage their skills for social good.

SGM was born in Brazil as an interconnected global network of local communities that use the power of food to create social change, connecting, collaborating and creating partnerships.

Social gastronomy as a concept can be found in communities across the globe and encompasses all levels of the food production chain – from sowing and harvesting crops to preparing meals, to upcycling food waste – to create social change, transforming the lives of underprivileged populations and victims of social exclusion or marginalization.

By integrating, educating and connecting human beings through food and social gastronomy, we can generate a more equitable, inclusive, innovative and solidary society. Social gastronomy involves the whole food network instead of looking only at the value and food chains.

SGM's vision is to connect and strengthen social gastronomy communities around the world working towards an equitable future, inclusive society and a healthy planet. For SGM, only by starting from the individual perspective – with access to healthy and nutritious food – can real change happen at the societal level.

There can be an awakening from a cultural and educational perspective. The movement embraces a systemic point of view where, without being good as individuals in our own daily lives, no change can happen.

> We need to wake up. It is time to move from an ego-system to an eco-system. Cross-sector collaboration and partnerships are more fundamental than ever before to address the inequalities in our food system and rebuild trust, bridging the ever-growing societal divide. <



## David Hertz

Social entrepreneur;  
co-founder and  
president, Gastromotiva

# How collaborative effort can contribute to our success even in times of crisis



- Social gastronomy is a channel to decrease social inequality, improve nourishment and connect people in this moment of crisis in favour of leveraging skills for the collective good. It embraces all levels of the food production chain to create social changes, transforming the lives of vulnerable populations and victims of social exclusion and marginalization.

Gastromotiva is a non-profit organization focused on education and capacity-building that trains less fortunate individuals – low-income youth deprived of their liberty, immigrants and women in vulnerable situations – using food as a tool for social change.

When COVID-19 began to spread in Brazil, Gastromotiva had to suspend many of its activities, so they developed the idea of turning their dining space into a food bank, providing daily dinners to 90 vulnerable people. They also partnered and supported organizations that continued to prepare meals and serve people in need.

Restaurants, hotels, supermarkets and individuals donate food that would otherwise be wasted. In the first two months of the project, they donated 35 tons of food to 35 partners, and more than 45 000 meals were served to people who are vulnerable. Gastromotiva also launched Solidarity Kitchens to offer 400 meals per week to populations facing situations of food insecurity.

Through partnerships in 2021, they aim to open 300 kitchens all over the country and offer 1 million meals a month for those who need them most. In the nine months of the project, Gastromotiva donated more than 200 tons of food (through its food bank) to 66 partners, and more than 415 000 meals were served to people in vulnerable situations.

As a society, we need to adapt to a more collaborative and sustainable way of living, respecting humanity and the environment. We need to transform solidarity into a daily habit in the hospitality and gastronomy businesses.

> Food feeds the body, the body feeds the soul, the soul connects us. Together, we can feed humanity with humanity. <





## Uridéia Andrade

Head chef,  
Buffet Flor de Mandacaru

## Collaboration: the basis of success in times of crisis



- Uridéia Andrade runs a catering business based in São Paulo that was hit by the COVID-19 lockdowns along with the entire food sector.

Buffet Flor de Mandacaru had to close its doors and was faced with the challenge of needing to generate a minimum income to honour its fixed commitments. In order to alleviate crises in the food sector – which was hit hardest – Andrade expresses that the only solution is to find out how to reinvent businesses in the market.

At Buffet Flor de Mandacaru, they started working with a line of sustainable frozen meals, offering balanced foods with a zero-waste concept.

The aim is to optimise production costs and bring a different menu option to customers. In her words, there is a need to remake businesses, to plan and create strategies to encompass new opportunities that are emerging. In trying to find solutions and keep serving the community, Andrade started the partnership campaign “Mobiliza Jaguaré” to mobilize the Jaguaré neighbourhood. The campaign brings people together to help make baskets of basic supplies to distribute food in seven slums of the district.

They have managed to support 600 families. Another partnership launched through the Solidarity Kitchens project aimed at feeding people by channelling students and youth.

To overcome this moment, we need to create alliances; make partnerships with our neighbours, friends, customers and suppliers; keep serving the community; keep working; and not give up on our dreams of solidarity.

> I am sure that we need to reinvent ourselves and believe in better days, with more conscious people who assume their responsibilities as citizens! <





## Rafael Rincon

CEO, Ñam;  
president,  
Fundación Gastronomía  
Social - Chile

# Ñam, let's change the world by eating!



- In Spanish, “ñam” means tasty, a fitting name for the cultural festival that happens in Chile and the Plurinational State of Bolivia in celebration of gastronomy as an actor of social change.

Public and private institutions come together with community members to create activities and content that promote food security. In Ñam CEO Rafael Rincon's words, food must always favour health, culture and the environment.

But positioning food ethics as the engine of development for the gastronomic industry is a challenge. Alongside this challenge include the promotion of short circuit and agro-ecological production, as well as the promotion of basic food culture to strengthen food security in communities.

In 2018, the Social Gastronomy Foundation (SGF) was founded to run the social gastronomy hub in Chile and unite Latin America. It is a platform that connects those in the social gastronomic chain who want to transform the world through food.

Good food and food education are conceived on a human scale and are the basis of a better life and the basis for building resilient and healthy communities.

Through knowledge of the food cycle and its territory, respect for traditions and innovation, a better quality of life can be built. Embracing this vision, SGF creates working groups with relevant actors from academia, the public sector and the gastronomic industry to systematize the work and share it with the wider community and public institutions.

> We believe in the connection, collaboration and partnership of the players in the gastronomic chain as a basis to generate positive social impacts in our communities. <





## Paola Pollmeier

Founder,  
Platos Sin Fronteras -  
Colombia

## Breaking down borders and fighting malnutrition with Platos Sin Fronteras



- Platos Sin Fronteras is a network that, through social gastronomy practices, tries to address malnutrition, food waste and social inequalities.

It started as a volunteer group to foster nutrition and education in a vulnerable community of Medellín when community leaders felt a need to learn how to cook differently and provide a service to people in need.

The network believes that nutrition is a human right. It pursues a mission of bringing adequate nutrition access to as many people as possible, and to create more personal growth and employment opportunities to gradually break the cycles of poverty and scarcity.

Platos Sin Fronteras fosters a network between public, private and civic entities, and works to integrate into that network nutrition experts, chefs and community leaders. This aim is to empower as many people as possible so they can have a choice and nourish themselves differently.

The organization designed an effective curriculum that initiates a circular economy model around nutrition and food. It offers workshops that empower women through dialogue and cooking-certification workshops.

Community members become independent beneficiaries and are mentored to act as agents of social change alongside chefs, gaining work experience in the gastronomic sector.

> Nutrition education has the power to make our world a better place. <

## | Highlights |

- Ancestralism is another way of looking at the future, drawing from solutions and technology of the past and applying them.
- Agroforestry provides a valuable alternative to simple agriculture, using a more biodiverse and complex system based on the logic and intelligence of forests.
- As natural forests are cleared for agriculture and other types of development, the benefits that trees provide are best sustained by integrating them into agriculturally-productive landscapes.
- The systematization of knowledge will lead to the dissemination of agroforestry systems, promoting scalability.
- The pandemic crisis revealed the collective task forces of communities and peripheries to the world. Several volunteer actions mobilized to donate food to those who need it the most, demonstrating true solidarity.
- We need to promote sustainable and nutritional food education to generate social impact in individuals and their communities.



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# SESSION 20 COLOMBIA BOGOTÀ

22.30 hours [GMT]

17.30 hours in Bogotá



CIRCULAR LIVING

## Regenerating the planet

Gunter Pauli

How the transformation starts in the periphery

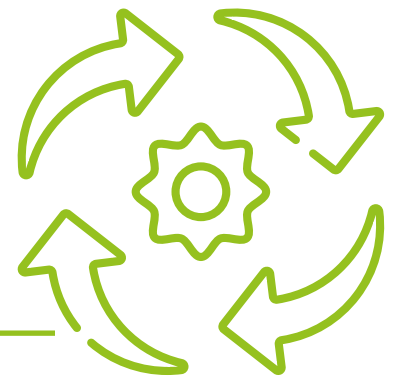
MODERATOR | **Julia Dalmadi** | Director of community programmes, FFI



**MODERATOR | Julia Dalmadi** | Director of community programmes, FFI

This session delves into the disconnection of our current business model from nature.

With some progressive thoughts on what productivity means and what it should mean, Gunter Pauli, dubbed “the Steve Jobs of sustainability” has a message for new generations of entrepreneurs.







## Gunter Pauli

Founder,  
Zero Emissions  
Research Initiative  
(ZERI); author  
of *Blue Economy*

> At a time when all stops and locks, those who move boldly set the agenda for the future. <

## How the transformation starts in the periphery



- We live in a time when genetics and chemistry are deployed to generate more output, and we demand that nature do and provide us with more. But it is crucial at this point to ask: What more can we do with what nature already produces? Asking this question will help respond to the basic needs of all with what is available locally, increasing the resilience of communities and generating urgently-needed job opportunities.

Twenty-one years ago, a new research initiative in Colombia began studying how to use coffee waste to grow mushrooms. It was found that 1 kg of coffee waste (pulp and grounds) is able to produce 1 kg of mushrooms, meaning that the massive production of millions of tonnes of coffee could result in millions of tonnes of mushrooms. Then cascara and mucilage were rediscovered as superfoods. Thus, when farmed under the canopy of a forest and converted to a solid with roasted coffee and cacao butter, they increased farmers' income by a factor of five. The same was true for using citrus fruit peels to produce vinegar as a cleaning product for the bathroom and kitchen. Mango seeds can be hydrated and serve as an additive to nutrient-depleted bread. These are only a few examples of the incredible grassroots initiatives that have been implemented.

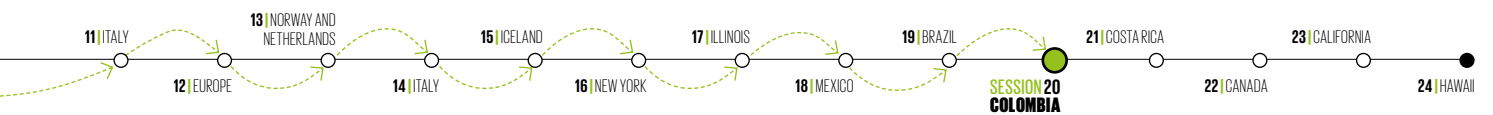
The reality is that our current business model is completely disconnected from nature and is based on the notion that natural or organic farming means less productivity. This incorrect belief has to face the new reality that a forest on land produces 500 tonnes of biomass and a kelp forest in the sea produces 1 000 tonnes of biomass. This is compared to a poor maximum of 10 tonnes for GMO corn or soy. If we want to truly change food systems, then we need to switch from the simplistic measurement of how many kilograms we produce per hectare. We should evaluate instead what we can generate in the three-dimensional space of the forest or the sea. We have a clear lack of inspiration and remain ignorant about the opportunities around us. Action is the key. We need a new generation of entrepreneurs for the common good with the capacity to act.



## | Highlights |

- We are stuck with the notion that whenever you farm naturally or organically you have less productivity. We measure organic productivity by only looking at output per square kilometre. We need a transformation of the business model.
- We need to regain our connectivity with the land, and we need to regain our capacity to produce with what we have. We can do this, provided we enjoy and work with the biodiversity around us.
- High quality, sustainable and healthy food must become accessible and democratic for all society.







SESSION

21

COSTA RICA  
SAN JOSÉ

23.00 hours [GMT]

17.00 hours in San José



CLIMATE-SMART ECOSYSTEMS

# Improving livelihoods and production-sustainable solutions in the Americas

- Federico Sancho • Improving livelihoods and production systems in the Americas
- Kelly Witkowski • Advancing climate-smart rice production in the Americas
- Amadeo Escarraman • Development projects for sustainable and resilient coffee growing
- Angelica Fort • Experiences of the Fund for Sustainable Access to Thermal Renewable Energy
- Santiago Velez • Access to efficient energy is possible from the agricultural sector
- Manuel Hidalgo • AgriPerfiles

MODERATOR | **Sara Roversi** | Founder, FFI







MODERATOR | **Sara Roversi** | Founder, FFI

This session seeks to demonstrate the capacity of implementing sustainable production means and livelihoods of the American continent.

This is based on the experience that the Inter-American Institute for Cooperation on Agriculture (IICA) has had in the Andean region, promoting renewable thermal energy and using information technologies to achieve "Agriculture 4.0."







## Federico Sancho

Planning, monitoring  
and evaluation manager,  
IICA

# Improving livelihoods and production systems in the Americas



A significant percentage of the rural population in the Americas live under poor conditions, and most of them rely on agricultural opportunities as their primary source of both income and calories. The provision of practical solutions for rural territories has become a pillar towards better development interventions. The Americas – as the food basket of the world – has a unique opportunity to demonstrate relevance and become the stable, long-term solution for development and prosperity in many countries.

The bond between rural development and agriculture is unique and unbreakable. Promoting a solid Agriculture 4.0 in rural areas is the best investment for the prosperity of our countries. A clear, long-term strategy of innovation inside rural areas and agriculture offers the best return on investment in the short term.

Pushing for better livelihoods and more sustainable food systems is supported by intensive use of knowledge and the smart use of information and communication technologies (ICT). This means better investment in technologies, knowledge-sharing techniques, ICT access, extension services, applied research and connectivity. The exchange of knowledge among nations is one of the best tools for global objectives.

The IICA is an international organization based in Costa Rica, with offices in 34 states of the American continents. Since 1942, it has been supporting the efforts of states to achieve agricultural development and rural wellbeing through the technical recovery of excellence. The IICA manages a portfolio of more than 234 projects across the Americas regarding bio-economy, rural development, livestock health, trade and climate change.

> Agriculture is the best opportunity we have to promote sustainable well-being. <





## Kelly Witkowski

Manager, IICA  
Climate Change,  
Natural Resources  
and Management  
of Production Risks  
programme;  
promoter,  
Rice Intensification  
Systems (SRI)

# Advancing climate-smart rice production in the Americas



- Rice is produced in more than 20 countries of the Americas, on over 7 million hectares, by 1 million people – 80 percent of whom are small-scale farmers.

The environmental footprint of rice production can be significant, and climate change exacerbates the many challenges facing the sector. In the case of Chile, rice production is projected to be greatly impacted by the changing climate, with the possibility of yields halving.

With the severe, decade-long drought the country has been suffering through, Chile's 1 500 rice producers are unable to extend their production areas to meet national demand.

The synergic work with Chile's Institute of Agricultural Research, obtained encouraging results at the experimental level: a 90 percent reduction in the use of seeds and a 60 percent reduction in the use of water, but with similar productivity. This is key in a region facing high water risks.

SRI is a principle-based, climate-smart, agroecological methodology that seeks to increase productivity by changing the management of plants, soil, water and nutrients while reducing external inputs to save costs for producers.

Other validation plots across the Americas have shown yield, agronomic, environmental and economic benefits. SRI works for producers and is also a solution that can help countries achieve their national adaptation and mitigation goals.

IICA and partners have validated that system in eight countries, generating knowledge and tools to support producers and seeking to overcome the major barrier to scaling: the high cost and scarcity of labour.

> Investing in cost-effective, nature-based solutions with multiple benefits, like the System of Rice Intensification, is key to enabling emissions reductions while ensuring farmers' livelihoods, agri-food systems and food security are resilient to climate change and other shocks. <



## Amadeo Escarraman

Specialist within coffee and forest agrosystems (Dominican Republic)

## Development projects for sustainable and resilient coffee growing



- Coffee is a permanent crop with great environmental importance, and with more than 80 percent of the production in the hands of small and medium producers, it is economically fundamental for many countries, including the Dominican Republic.

We live in a time where any information is at our disposal, but we need to ensure that knowledge and information also reach the sections of the population who live and work in remote areas, like coffee smallholders. Conscious of this importance, the Dominican Republic component of the Central American Program for the Integral Management of Coffee Rust (PROCAGICA) promotes initiatives to increase coffee and forest production system knowledge among traditional and younger farmers.

One of these initiatives is a programme for raising students' awareness about climate change and coffee forests, aimed at strengthening the capacity of youth to understand what coffee represents for the community and its impact on the economy and the environment.

In partnership with the country's Ministry of Education & Human Resource Development and the Dominican Institute of Coffee (Instituto Dominicano del Café), the programme brought together coffee and project technicians and natural sciences teachers to run workshops in schools.

Another initiative Amadeo Escarraman mentions is the implementation of an early warning system for pests and diseases. In recent years, a rust plague has devastated many of the coffee plantations, decreasing the production and bringing many small producers to bankruptcy.

For this reason, the project began a detection system to understand which actions can minimize the use of pesticides and avoid plant diseases – benefiting thousands of producers and impacting 1.7 million plants that are fundamental to maintain coffee growing.

> With good farmers, we will have the best quality of life on the planet. <



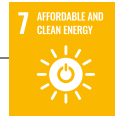




## Angelica Fort

Renewable energy specialist,  
Renewable energy solutions (Perú)

# The experience of the Fund for Sustainable Access to Thermal Renewable Energy (FASERT)



The Fund for Sustainable Access to Thermal Renewable Energy (FASERT) was created in 2014 to stimulate the market for renewable thermal energy technologies. This is in order to promote sustainable access to clean and efficient energy for rural and peri-urban populations, promoting increased income and improved quality of life.

The general objective has been to dynamise the technology market by strengthening the offerings through training programmes, raising awareness on investing in renewables and linking both to rural financial entities. Families, producers and entrepreneurs have benefitted from the results.

Rural households had access to renewable energy technologies that improved their quality of life. By the end of the programme: 33 000 improved wood stoves were installed, reducing respiratory and eye diseases, and 700 solar water heaters were also installed, creating savings on electricity, gas or firewood.

> FASERT's objective was to energize the value chain of the thermal renewable energy technologies market. However, access to the technologies promoted by the project went beyond the goals.

...

The market was indeed energized [and] the quality of life of families was improved while positively impacting the environment. <

More than 1 200 coffee growers benefited from the acquisition of solar coffee dryers, which allowed them to improve grain quality and thus their income; 10 biodigesters were installed, purchased by livestock families, making it possible to generate biogas fuel and fertilizers such as biol and biosol. In terms of environmental impact, the project improved wood stoves, reducing 18 310 tonnes of carbon dioxide per year.

Once finished, the outlook was that IICA would continue promoting renewable energies, especially productive ones, with emphasis on those related to agriculture and the rural sector. New projects are now being implemented in the Plurinational State of Bolivia.



## Santiago Velez

IICA representative,  
Pesticide Management  
(the Plurinational State  
of Bolivia)

# Access to efficient energy is possible from the agricultural sector



- The FASERT project has been replicated in the Plurinational State of Bolivia, addressing the great challenge facing the country in the agricultural sector in terms of efficient food production. Through the combination of efficient technologies, it is possible to generate different and sustainable livelihoods.

This is the grounding idea of the eco-sustainable house, developed with the typical architectural characteristics of housing in the Altiplano region, but incorporated with renewable information and communication technologies.

It consists of a thatched roof house, 800 square-metres of space with different types of installed technologies able to generate a suitable environment for families to have a high quality of life, produce healthy and safe food, and have access to sources of energy and communication. In this space, a family of approximately five people can live comfortably, growing all their vegetables for the year and producing vegetable protein, with a financially viable investment of USD 15 000.

The experience of the ecosystem housing shows that technology, as a disrupting agent of all innovation processes, truly makes us much more solid and capable of generating a better quality of life for people. How to use these energies (deficient or renewable) in rural areas is precisely one of the objectives of the FASERT project implementation in the Plurinational State of Bolivia.

This project demonstrated an eco-sustainable home, visited by more than 1 500 people in the Plurinational State of Bolivia, representing a space in which information and many technological adaptations can be shared, showcasing how these technologies can improve the quality of life.

> Agricultural production with clean and efficient energy supports the productivity and resilience of rural populations. <



## Manuel Hidalgo

ICT specialist, IICA  
(Costa Rica)

## AgriPerfiles



- AgriPerfiles is a hemispheric initiative led by IICA to promote a better link between the professional profiles of agriculture and rural development. This service operates through VIVO, an open-access semantic web platform that facilitates the location of research and technical knowledge in multiple disciplines and administrative ends. VIVO was developed by Cornell University. After 2009, in conjunction with five other universities in the United States of America, it was expanded into a tool capable of integrating profiles between various institutions. Likewise, its adoption facilitates collaboration between people not only within organizations but also between different sectors. In 2013, IICA, the United States Department of Agriculture and Cornell University began adapting the tool to the Spanish language.

AgriPerfiles provides visualization and network analysis tools that maximize benefits with the use of available data. This tool, which currently showcases more than 14 000 profiles, allows high-quality data, such as information on researchers, their collaborators and publications, to be accessible via an elegant visualization of research efforts at a local, multinational or global level.

Any individual has access to an AgriPerfiles search engine via the web. Researchers, academics, technicians, administrators, financial agencies, donors and civil society can benefit from using AgriPerfiles and its data to:

- create interdisciplinary research teams;
- identify opportunities for financial support;
- recruit specialized personnel;
- locate publications;
- plan resources, services and budgets;
- visualise complex networks and working relationships;
- identify specialists by subject areas; and
- know the evolution in time of people, organizations, projects, networks and research.

The proposal seeks to motivate its 34 IICA member states to integrate the greatest number of professional profiles in the agricultural and rural development fields in one place. The experience of more than two decades in document information management within the framework of the Alliance of Agricultural Information Services of Americas, and the more than 178 associated institutions, place the institute in a preferred position to articulate a platform of multilingual professional profiles that better link scientists, technicians and other relevant stakeholders in the agricultural sector of the Americas.

> AgriPerfiles connects agricultural specialists from the Americas. <





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## | Highlights |

- New techniques, better genetic material and innovative approaches towards linking youth to a more resilient and sustainable way of producing are some of the main goals towards a more invigorated agriculture.
- There are numerous opportunities to put real innovations into practice. Some have already increased the yield of rice, raised interest of youth in agriculture, shared knowledge on forests and coffee, and benefitted the health of women through providing sustainable stoves.
- SRI works for producers where they need it, improving productivity and the utility of the system while reducing costs and increasing income.
- The combination of efficient energies and sustainability could be encouraged to create better livelihoods.
- It is possible for a family to live within 800 square metres, consuming what they produce and achieving a positive quality of life in terms of preparing food and generating added value.
- The international community is providing a toolkit of ICT solutions like apps to share information, including the AgriPerfiles network to better link scientists and agriculture professionals.
- Taking advantage of available knowledge, countries' interest in sharing expertise and needs should increase the pace toward sustainable development and prosperous rural livelihoods.







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SESSION

22

CANADA  
VANCOUVER

00.00 hours [GMT]

17.00 hours in San José



# A food chain for all: values, from grassroots to future trends

Mark Brand

Business and charitable endeavours: a new blended model

MODERATOR | **Tim West** | Slow Food chef, social entrepreneur and food futurist







**MODERATOR | Tim West** | Slow Food chef, social entrepreneur and food futurist

This session reports the experience of a new kind of leadership that focuses on incorporating good actions into every step, affirming the importance of sustainable business models that make a difference, while also creating successful bottom lines.







## Mark Brand

Founder,  
Save On Meats; creator,  
The Token Program

## Business and charitable endeavours: a new blended model



This is an unprecedented moment for creating opportunities to evaluate the food system, but this requires us to make choices. Whether concerning the grossly irresponsible production of food, or its employment consequences, all the criticalities of the system have been exposed, and consumers' behaviour has begun to change. It is important to use this moment to keep training people about the importance of food choices.

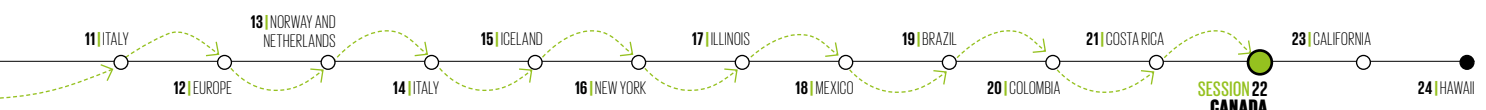
As one of North America's foremost social entrepreneurs, Mark Brand has been spreading a message on the importance of sustainable business models that make a difference and also create successful bottom lines (Benefit Corp).

Together with the Better Life Foundation, the aim is to train, feed and employ people, particularly those in need. During the lockdown, they started a meal programme providing 1 800 meals a day for people transitioning out of poverty or incarceration. The foundation has also been conducting training sessions in New York, which has one of the United States of America's poorest district and some of the highest rates of diabetes and heart disease, working with women and children to help them understand the power of food and provide food justice.

Better Life Foundation also organized remote training programmes by sending boxes worth USD 25 from farmers directly to doorsteps, and teaching people how to cook.

For this care model to succeed, it is important that each one of us takes a role in this "game of inches," by truly and genuinely understanding what we care about and what skill set we can bring to organizations that are already actively working.

> As food providers and chefs, what is the simplest way to deliver our message to help people understand how to activate?  
As a system designer, this is a moment unprecedented - the opportunity to evaluate the system. <



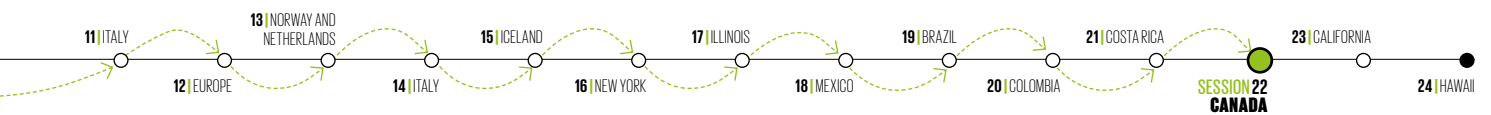
## | Highlights |

- Benefit Corp is the only way to go forward in business. Organizations, food providers and chefs should deliver messages to help people understand how they can engage with daily challenges and activate themselves in this view.





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SESSION

23

UNITED STATES  
CALIFORNIA |  
SAN FRANCISCO

01.00 hours [GMT]

18.00 hours in San Francisco



PROSPERITY

# Responding to COVID-19: perspectives on food and sustainability from the land of innovation

- Elizabeth Carney • Working together: nature is our partner
- Behzad Jamshidi • The role of chefs to preserve the planet
- Raman Frey • Post-pandemic food systems
- Silvia Baldini • Going back to a regional and local lifestyle

MODERATOR | **Chiara Cecchini** | CEO and co-founder, Future Food Americas



**MODERATOR | Chiara Cecchini** | CEO and co-founder, Future Food Americas

In this session, speakers resounded the need to become more regional and less global.

Throughout the pandemic, people have shown their willingness to learn and cook and again be a part of an old-fashioned community.







## Working together: nature is our partner

### Elizabeth Carney

Executive producer,  
Tribal Code; founder,  
Zen Heart;  
chair, Business and  
Leadership Forum  
at the Commonwealth  
Club of California



There has never been a time in which our awareness of our immune systems' weaknesses has been any more starkly visible than during this pandemic.

This awareness brings the need to transform the paradigm of modern medicine into one that is much more oriented towards the root causes of chronic disease and the influences of different habits.

We can change our "lifestyle intelligence" to make proactive changes. With this purpose, Zen Heart creates local communities for small groups of people to help each other embrace new, healthier habits – from making kombucha to starting walking clubs.

All kinds of lifestyle intelligence can be generated from the local community, and from there we can start to identify our allies.

The current question is: How can we support our health? Somehow, we have to develop new learning systems to listen to our intuition and nature.

There are projects like in eastern Oregon, in which some native people started to prototype a nature-based health system, using native plants and foods for medicine, placing hands on the steering wheel of their health to find ways to change lifestyles for the better.

This moment is for taking time to reflect as if was a signal from the Earth itself. We have seen that once we as human beings begin to change our behaviour, Mother Nature responds, regenerating herself.

> When we consume vital food that comes from vibrant soil, we are given vitality that our brains use [and] energy to think the thoughts we need to solve the problems of the world. <



## Behzad Jamshidi

Executive director,  
Moosh NYC

# The role of chefs to preserve the planet



- Chefs play a fundamental role in preserving our planet and impacting the sustainability of our food systems, but this role has to be clearly identified.

There is a need to incentivize people to interact more deeply with food and with smaller, more ethical systems. Restaurants and their resources should represent the farmers and vendors that are at the centre of this agricultural shift, helping people recognize the issues in our overly commercialized food systems.

Many chefs are addressing these challenges, advocating for better farming practices by using their menus as a grounding place for farm-to-table items and sharing dialogue around the community of vendors behind each of their dishes. But this is not all.

Chefs may foster responsibility through media and storytelling to help influence and educate consumers to become more ethical in their interactions around food and agriculture.

New trends are emerging in the food industry, with the media celebrating and sharing ethical practices and the outstanding products they create, such as natural wine and low intervention foods. As a chef, Behzad Jamshidi supports those who take responsibility for their climate actions, giving them a platform on which to be celebrated and educating those who have yet to begin their journey.

We need to teach people that responsibility can be a pleasure. Integrity is rooted in joy. You do not need to be a chef to be passionate about food. And you do not need to be a farmer to make a difference in agriculture.

> We've all been gifted time. If [we] emerge not knowing our true work, we've wasted the greatest opportunity mankind has ever been given to reflect. <



## Raman Frey

Founder,  
goodpeopledinners.com

## Post-pandemic food systems



- Industrial agriculture has gone through wave after wave of consolidation, arriving at monopolies and syndicates that do not serve the public's health or the health of the biosphere.

We live with and accept many “slash and burn” protocols, made palatable by hiding their effects from public view. But this pandemic presents an opportunity to question and reinvent rather than modify the legacy systems we’ve inherited. Many businesses are taking the lead towards a new way of running quantity-demanding sectors, such as meat and fisheries.

New Age Meats, for instance, is a company committed to eliminating the need for most animal slaughter through the development of cultured meats grown in bioreactors.

In the same way, innovation is spreading for green aquaculture, hopefully receiving government subsidies and investment, along with “culture-shift marketing” to make the shellfish and ocean vegetables they produce part of our regular menus.

Likewise, we need to trigger a change in our own daily lives and in the way we think about food and community. Sharing meals and conversations together could once again become the focus of a fulfilling life, around the village’s central fire or its 21st-century analogue.

It will have dozens of positive quality-of-life ramifications and improve both physical and mental health. If we set ourselves to the task, we can create the kind of “cradle to cradle” food systems that support virtuous feedback loops, healthier ecosystems and healthier people, as well as more flavourful and enjoyable meals together.

> Let's build a future that works for everyone, where biodiversity rebounds, where people see their role as magnanimous stewards of wealth, not just self-indulgent consumers. <







## Silvia Baldini

Founder,  
Strawberry and Sage

## Going back to a regional and local lifestyle



- Food is fundamental, but we have forgotten how to support our community. We no longer cook because we either have forgotten how, or we don't have time.

Nevertheless, during this pandemic, we have seen a lifestyle change for consumers in motion – and a small window of opportunity to relearn old habits like eating seasonal food, learning to cook unfamiliar vegetables, shopping local and supporting our small regional farming communities.

As chefs and educators, we need to encourage this as the new normal and regenerate old ideas into new, combined with new technology. Investing in smallholder women and men is an important way to increase food security and nutrition for the poorest, as well as food production for local markets, and it also brings us back to being a healthier society.

Waste less food and support local farmers, donate what you don't use, lobby to change policies, because it's the only way to change our food system and avoid future disasters.

When talking about food, people want to share their own experiences. We all come from different cultures and traditions, and we all love to share our traditions.

That's the most beautiful and interesting part of being a chef: bringing people around the table. But chefs also have an educational role. Education is the way, it enables upward socioeconomic mobility and is a key to escaping poverty and hunger.

We need to create a modern home economics programme and make it mandatory in schools. Let's once again teach and learn how to cook at home and how to shop locally. We need to preserve this sense of living in the community with food in mind.

> Food is fundamental!  
Let's go back to regional practices and let's educate. Let's bring tradition and innovation together. <

## | Highlights |

- The best and most vibrant brain food comes from vibrant soil. At the end of the day, that's the fuel we need to solve our world's problem.
- We need healthy habits for individuals, stronger connections for communities – especially through sharing food – and a new vision of food and health systems for societies.
- The food lobby incentivizes heavily processed, low-cost, shelf-stable foods that contribute to diabetes and obesity, with all their correlated impacts on physical and mental health.
- There was a trend to be more regional physically, but, due to this pandemic, we are now forced to be more global digitally, as this way we have no limits.
- Chefs are storytellers with their food, and have the ability to bring those stories to the table – but stories are built by the people at the table.
- We are losing our connection with the art of cooking. The newest generations should be retaught our old food traditions.



SESSION

24

UNITED STATES  
HAWAII | HILO

3.00 hours [GMT]

17.00 hours in Hilo



PROSPERITY

# Preserving the world's heritage, empowering local communities to build prosperity for all

Christopher Spezzano

Healing the world through food

Malia Smith

A systems-based approach to health and healing

Kumu Ramsay Taum

Ancient wisdom, future knowledge: we are what we eat

MODERATOR | **Sara Roversi** | Founder, FFI







MODERATOR | **Sara Roversi** | Founder, FFI

This is the last session of the 24-hour digital marathon, closing this symbolic day.

The journey ends in a place, Hawaii, where human connection with Mother Earth is incredibly powerful.





## Christopher Spezzano

President,  
Empathy Incubator

# Healing the world through food



- There is an opportunity for governments, businesses and each one of us to heal the world through food. We must return to a way of living that supports human relationships and being in harmony with the earth.

The security and vibrancy of local business markets and industries are the only way to prevent the world from being ripped apart by technology. Without community resilience, languages and culture will be extinguished by globalization, while the disparity of wealth escalates.

Community-based business is the most valuable next step for the planet – helping humanity utilize the heart and mind so that it can be in a mutual relationship with the natural world, as well as with one another as people – valuing every community resource in the long-term as well as the short-term.

The only way for us to reverse the negative effects of globalization is by regenerating local market security, and food systems intersect with every facet of our communities.

Local food systems are the best way to create sustainable gross domestic product, and each dollar spent in a local food system circulates two to four times in the local economy – because local food businesses do business with other local businesses.

Technologies on their own can be harmful and many so-called “sustainability” and especially “disruptive” technology solutions cause great harm at the local level. Without the human component, heart-based relationship and *aloha*, technologies like drones, robots and AI will displace local industries and perpetuate a system of inequality and wealth disparity.

The history and values of each culture need to be woven into the governance of each technology and each community's choices about how they wish to interact with and implement technologies and systems.

> The only way to reverse the negative effects of globalization is by creating local market security. <





## Malia Smith

Ed.D; board chair,  
Sustain Hawaii;  
CEO and owner,  
Sustainable Ideation

## A systems-based approach to health and healing



- Through various integrated initiatives, from a plant-based restaurant in Waimānalo to the Hā'ehuola wellness programme promoting sustainable health among native Hawaiians and indigenous peoples, Sustain Hawaii creates scalable prototypes of systemically healthy, ag-centric programmes.

Hired by the Hawaii Department of Agriculture, Sustain Hawaii developed a full action platform to increase locally-grown food production. They also promote the food sovereignty framework to support cultural practices and transition toward an evidence-based nutrient food model.

Sustain Hawaii's mission is on a systems-based experiential learning model (known as the 21st-Century Ahupua'a Campaign) that integrates Hawaiian values, principles and practices with Western science and technology.

Some of their projects include a regenerative food forest greenhouse laboratory; a comprehensive, quantifiable nutrient-tracking system that incentivises healthier food consumption; and a year-long wellness programme to address multiple social determinants of health. These initiatives, collectively, are part of an effort to establish an interdependent self-sustaining holistic community similar to what ancestors in old Hawaii practiced.

Sustain Hawaii says that foundational to its values and work are what it calls Hawaiian epistemology, the laws of thermodynamics and the seven interdependencies of health. The seven interdependencies of health include the "me" (physical, psychological and financial); the "we" (ecological, socio-cultural and economic); and the spiritual, which encompasses all.

Ultimately, the organization understands that optimal health is not only about the individual, but requires us to include and consider all things: *ka 'āina* (the land), *nā mea ola a pau* (all living things), *ko mākou kaiāulu* (our community) and *ko mākou Honua* (our planet/Earth). As an organization, they remain committed to *nānā I ke kumu* – looking to the source of well-being.

> Ko aloha la ea,  
ko aloha la ea! Keep  
your love,  
no matter what  
obstacles you face.  
Keep your love! <



## Kumu Ramsay Taum

Founder and president,  
Life Enhancement  
Institute of the Pacific

## Ancient wisdom, future knowledge: we are what we eat



- The relationship with our places, one another and our food is fundamental to our identity. Our relationship with Mother Earth is maintained through the food we eat.

The conversation about food today tends to be about delivery systems and supply chains. What we learn by looking at the practices of our ancestors is that food sovereignty and sustainability is achieved and enhanced by reducing the number of links in those chains.

When producers and consumers get closer together, we become more sustainable. We need to reframe, refocus and redefine our practices and our relationships with our food. In Hawaii, this means revisiting practices that enabled our ancestors to thrive in the most remote place on the planet. By bringing them forward, we too can live in harmony with the planet and one another.

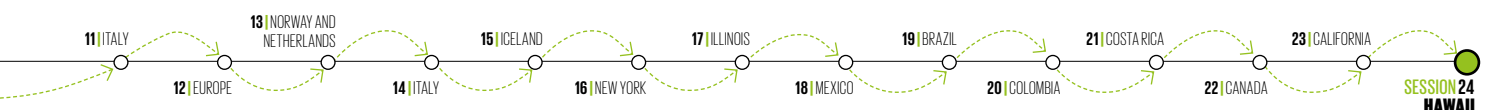
We need to refocus the sustainability conversation from one about “carrying” capacity, to one of “caring” capacity instead. When we care enough about “mother” and others, we will adopt appropriate carrying-capacity practices.

Key to that success comes a reciprocity agreement and attitude of giving and receiving, where everyone takes no more than they need and gives back in full measure. In this way, no one would ever be without, including the land.

This can no longer just be about transactions, but about relationships. We need to have reverence for our resources, our places and for one another, as well as respect those relationships. That will shift our behaviour.

Today, we live in a “me” culture, in a global community more concerned and focused on individual needs. It is time the conversation and effort turn back to the “we” in the community, because we are all connected, all related and all indigenous to Island Earth.

> Earth is an island suspended in a sea of space. We are all indigenous to Island Earth, which makes us all islanders. <



## | CLOSING WORDS |

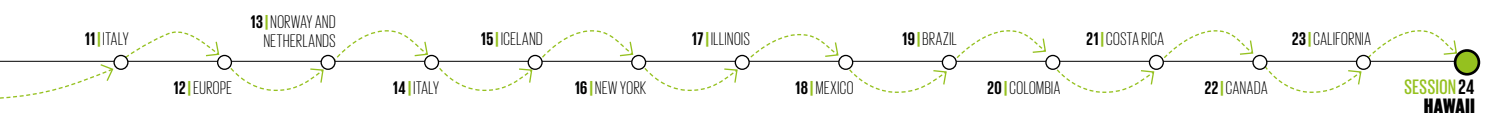
- The word *ha-wai-i* acknowledges the one thing that connects us all: the air we breathe.
- *Ha* stands for life-giving breath. The COVID-19 pandemic has reminded us that what connects us is air. While we may talk about common ground, we place boundaries and borders on land. What we really share is the air, where there are no boundaries. The word *wai* is the fresh water that gives us life, and together the air and the water are fundamental elements for life. Lastly, the *i* (ee), is the spiritual essence of all things, the creative energy that created us, and honours all our relationships.
- The very word *ha-wai-i* says to honour the air, honour the water and honour your relationships, wherever you may be on island Earth. In doing, so you are *Hawai'i*.







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earth



Our virtual journey around the world covered a distance of over **112 000 kilometres**. If we had used planes, it would have lasted more than **145 hours**; instead it only took 24 hours saving of about **363 660 litres of petroleum** and above all, generating



**ZERO ENVIRONMENTAL IMPACT!**



**Happy Mother Earth Day!**



→ ADAM LYLE → AJAY VIR JAKHAR → ALBERTO SALVATI →  
ALESSANDRO SCHIATTI → ALYSSA PIZZURRO → AMADEO ESCARRAMAN  
→ AMY HEYMAN → ANDREA CARAPELLESE → ANGELICA FORT →  
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CHIARA CECCHINI → CHRIS KRAUSE → CHRISTIAN SCHMITZ  
→ CHRISTOPHER SPEZZANO → CLAUDIA LARICCHIA → CRISTINA PETRACCHI →

## OUR DEEPEST APPRECIATION AND GRATITUDE TO ALL THOSE WHO CONTRIBUTED

DAMIANO BELEFFI → DANIELLE GOULD → DAVID HERTZ → DONGXIN FENG  
→ DOROTHY SHAVER → ELIZABETH CARNEY → ELIZABETH YORKE →  
ELLA ASBUN ORMACHEA → EVE TUROW-PAUL → FEDERICO SANCHO  
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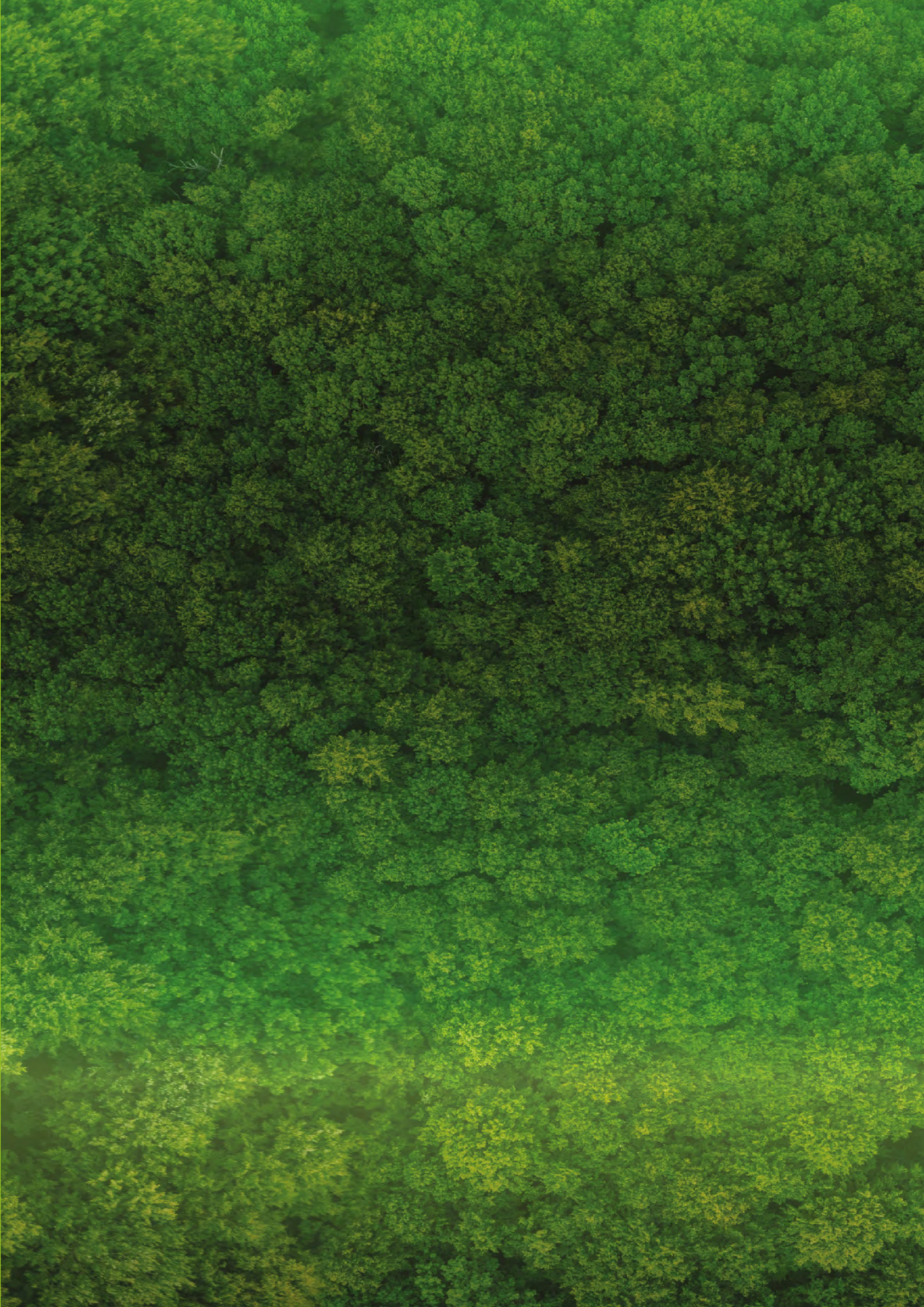
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**TO MAKE THIS GLOBAL 24-HOURS MARATHON A REALITY AND A GREAT SUCCESS!**

PAOLA POLLMEIER → PATRIZIA FRACASSI → PAULA PONTELI COSTA  
→ PETER KLOSSE → RAFAEL RINCON → RAMAN FREY → RAMSAY TAUM →  
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→ VICTORIA PANOVA → XIAOFENG DAI → ZAROUALI SAID SAGHIR











The full **marathon recording**  
of all sessions in the **24 hours**

Food for Earth Day – [futurefood.academy/earthday](https://futurefood.academy/earthday)

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