



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

2021



FAO elearning
ACADEMY



24-HOUR GLOBAL MARATHON FOR SUSTAINABILITY FOOD FOR EARTH



TO CELEBRATE UNITED NATIONS INTERNATIONAL MOTHER EARTH DAY

2021

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and
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Thus begins our journey



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

Food for Earth Day – www.foodforearth.org/agenda

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As FAO assistant director-general, I am proud to contribute to this valuable global event, which is an opportunity for all of us to underscore the importance of sustainability.

The various global challenges we are facing, such as an increasing world population, hunger, the COVID-19 pandemic, food loss and waste, air pollution, greenhouse gas emissions, and the loss of biodiversity, all contribute to increase poverty and inequalities, and urge us to respond.

We immediately need to act holistically to transform our agrifood systems.

That is why FAO's new Strategic Framework focuses on the transformation to *more* efficient, inclusive, resilient and sustainable agrifood systems for better production, better nutrition, a better environment and a better life, leaving no one behind.

The "Four Betters" also reflect the interconnected economic, social and environmental dimensions of agrifood systems and support the achievement of the 2030 Agenda.

Maurizio Martina

Assistant Director-General, FAO



Sustainability is the only future for our planet. However, it cannot be achieved through independent or simplistic means. A systemic, integrated, multidisciplinary approach with broad participation that leaves no one behind is necessary.

The 2021 24-hour Global marathon for Sustainability organized by Future Food Institute and the FAO elearning Academy, part of the FAO Partnerships and United Nations Collaboration Division, brought relevant actors from every corner of the world to explore the interlinkages between the elements of sustainability and advance towards removing the obstacles that stand in their way.

The marathon was a perfect opportunity to create awareness and collectively find solutions for the future of our planet.

Marcela Villarreal

Director of Partnerships and United Nations Collaboration Division, FAO



Sustainability is about our Mother Earth, our future, our children

As the head of the FAO eLearning Academy, I am proud to have generated, with Future Food Institute, a global initiative for sustainability, where solidarity practices, environmental solutions, biodiversity, healthy agricultural practices and food systems, and new regenerative inclusive economies, are promoted.

It is a common space where we advocate for humanity's well-being and environmental sustainability to be placed back at the center of all debates, as there can be no future without sustainability.

Cristina Petracchi

Leader, FAO eLearning Academy



There is an urgent need to spread an integral approach to ecology, a change of mentality that can only be achieved through collaboration.

Starting from food and its potential to connect people and the planet, the marathon was a unique experience to develop a true integral ecological consciousness. From the North to the South, chefs, entrepreneurs, researchers, scientists, young people and policymakers, all spotlighted their sense of possibility and responsibility through active and collective involvement.

Pollica, Italy, was an undisputed symbol of regeneration and a great honor. In this historical moment, celebrating the Earth – together, here and now – assumes a unique value that allows us to understand how much places as well as politics can contribute to building a better future.

Sara Roversi

Founder and president, FFI

PAIDEIA CAMPUS

Study center, school and experimental Mediterranean laboratory of integral ecological regeneration

In an entropic crisis like the one we are experiencing, we cannot come out the same. It is up to us to understand what “being different” consists of and what direction to give to this new and more necessary than ever “rebirth.”

We have decided to restart.

To invest in our future: **YOUNG PEOPLE** are focusing on essential values – specifically the balance between **MAN and NATURE**. They are doing so from the cradle of civilization: **THE MEDITERRANEAN**.

In Salerno’s town of Pollica, the capital of the Mediterranean diet, the Future Food Institute inaugurated the Paideia Campus 12 years ago. Here, one can learn a new type of sociality and live the concept of integral ecology – a fundamental approach to face the transition necessary to achieve the Goals of the 2030 Agenda – in lifestyle and development models of which the Mediterranean diet is the most concrete example.

The Paideia Campus expounds a permanent version of the same concept: everything is connected – environmental protection and human health, regeneration of the territory and citizens’ well-being, social justice and climate change. The Paideia Campus was created to teach people how to see these connections and, thus, design a better future for Italy, for the Mediterranean and for the entire world.

The campus takes its name from the Greek term “Paideia,” which connotes “integral human education” as a weapon to navigate towards the ecological transition. It is a campus that aims to safeguard and enhance the cultural and natural heritage of the Mediterranean ecosystem through the commitment of a dynamic and vital community of young people engaged in the development of innovation in the agrifood field.

The mission and thus the activity of the Future Food Institute concentrates on three dimensions. We begin with **KNOWLEDGE**, organizing not only international research projects but also training programs that welcome people from all walks of life, from students to teachers, from start-ups to industry leaders the world over.

Then there is the theme of **INNOVATION**: Today, you can no longer think of innovation without thinking of sustainability, and this is a perfect place to test and prototype innovative solutions For sustainable fishing and agriculture, slow tourism, repopulating villages and making livable the inland areas of Italy that today must be enhanced and protected.

Finally, the involvement of the **COMMUNITY**, without which these places do not live. The community is a heritage that must be involved, preserved and regenerated so that it can hand down millenary traditions over the centuries. And this community is magical. It welcomes you, showing you that land must be cared for. It teaches you to appreciate a slower pace.



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These dimensions gain shape and context in Pollica, a rural village in the south of Italy, the epicenter of the Mediterranean lifestyle and a crossover point of history, culture and anthropology of this ancient heritage. In a perfect balance between humanistic and scientific culture, the Mediterranean lifestyle and diet have contributed to the construction of an identity that has now gone well beyond territorial or food borders. It has become a model within which we can concretely face the coming years, responding to the challenges inherent in the sustainable development objectives of the UN Agenda 2030 and the new European Farm to Fork strategy for the reduction of environmental impacts of agrifoods, which is considered critical at the global level. It is also establishing itself as a practical system within which to build a truly informed food tech future, one which begins locally and builds to a global scale while retaining the priorities of education and future generations.

Eleven years after the appointment of the Mediterranean diet as a UNESCO Intangible Cultural Heritage of Humanity, the awareness of how it is much more than a simple food model, but a wealth of science, traditional knowledge, skills and identity values generated by a territory, continues to grow. The region of Cilento – home to Pollica – can be considered a real laboratory of land and marine biodiversity and is capable of releasing unique natural wealth in the world. It is a cultural project that intersects multiple disciplines and has deep roots in the Paleolithic Era.



Food for Earth: 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 agriood 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 developed countries. Only by reshaping the agrifood system for the better is it possible to regenerate the planet instead of depleting it, strengthening the bonds within communities and enabling multistakeholder 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.



DIPLOMACY

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.



CIRCULAR LIVING

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.



CLIMATE-SMART ECOSYSTEMS

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.



FOOD IDENTITY

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.



PROSPERITY

In this area, food is considered within the economic scenario. Prosperity is going beyond just financial prosperity, and includes critical elements like 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 Marathon for Sustainability - for our Mother Earth, for our future

The FAO elearning Academy is pleased to have organized, with Future Food Institute, the second edition of the 24-hour Global Digital marathon for Sustainability entitled: “Food for Earth.” The global event brought together bright minds and good practices on sustainable food systems for regenerating the planet.

The 24-hour Global marathon for Sustainability is a knowledge sharing collaborative initiative, fully aligned with the United Nations Sustainable Development Goals Agenda 2030 and FAO’s Strategic Framework 2022-31, which focuses on the transformation to more efficient, inclusive, resilient and sustainable agrifood systems for better production, better nutrition, a better environment and a better life, leaving no one behind.

Overall objective of the 24-hour Global marathon on Sustainability

The 24-hour Global marathon is an extremely powerful initiative to raise awareness among the general public, entrepreneurs, startups, scientists, journalists, young leaders, policymakers, farmers and Indigenous Peoples on the importance of environmental, economic and social sustainability.

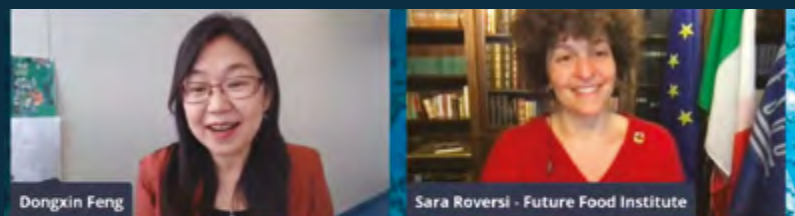
Its overall goal is to offer a common space for dialogue to voice concerns and challenges, and exchange and share experiences, good practices, methodologies and technologies on sustainability.

Sustainability is humanity’s greatest goal and the only way forward...

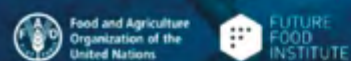
For this great purpose, we need competent professionals who are able and capable of taking appropriate decisions, formulating targeted and sustainable policies and strategies, and adopting innovative “green” methodologies and technologies. In other words, we can only achieve sustainability through the development of capacities, and transfer of skills, and multidisciplinary and transdisciplinary competencies, and that is the exact purpose of the FAO elearning Academy.

Let’s join forces to upscale capacity development efforts, foster innovation and generate change makers and future leaders empowered to sustainably revolutionize the food ecosystem, in full respect of humanity and our planet.

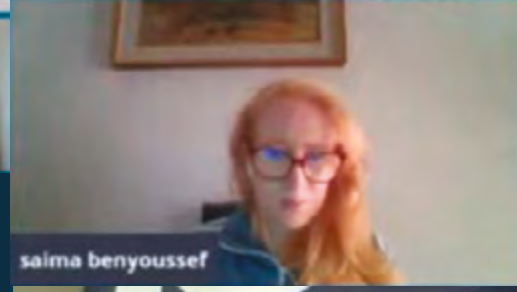
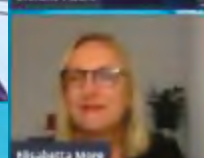




FOOD FOR EARTH



#EARTH DAY



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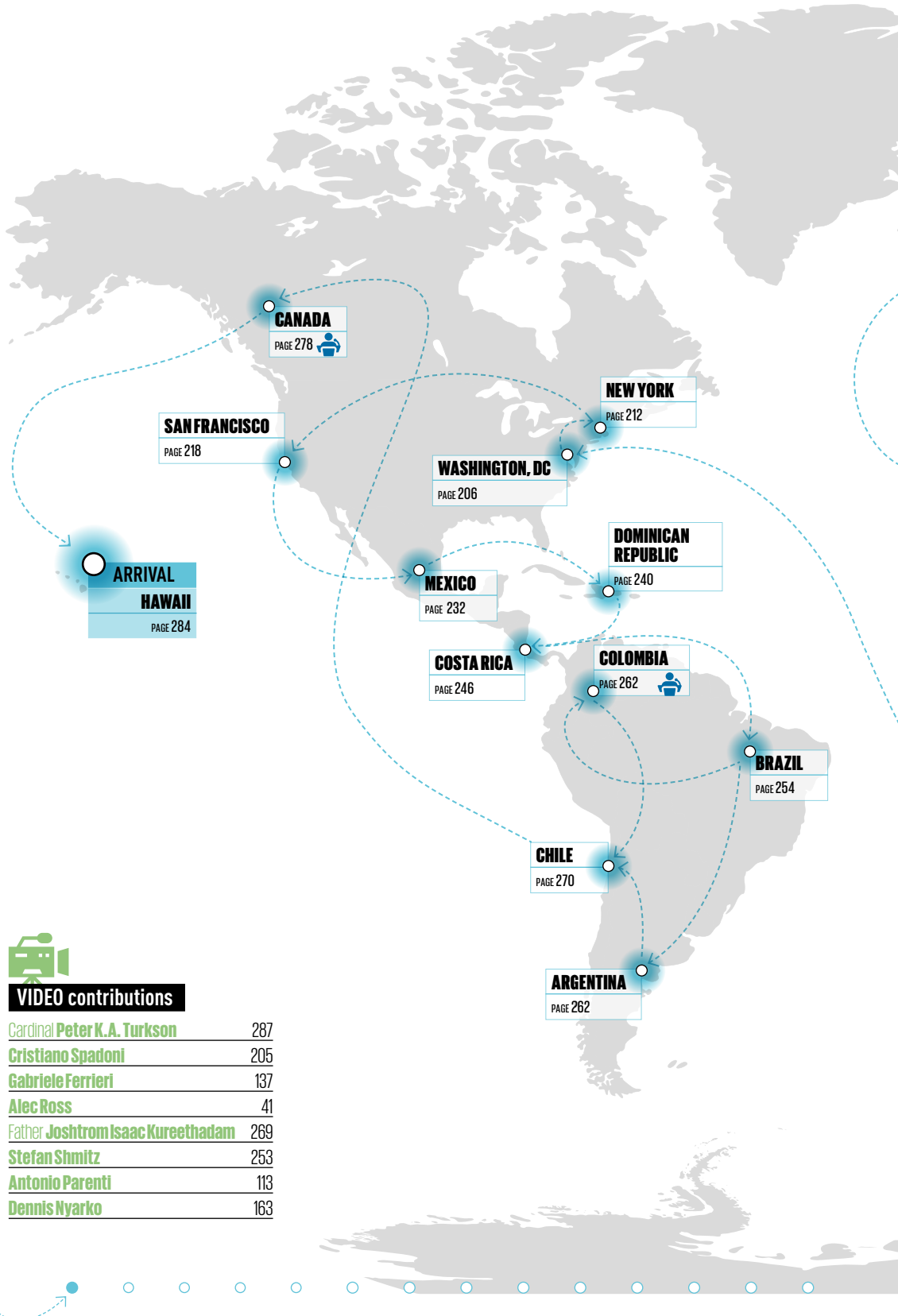
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in 24 HOURS

Participating NATIONS



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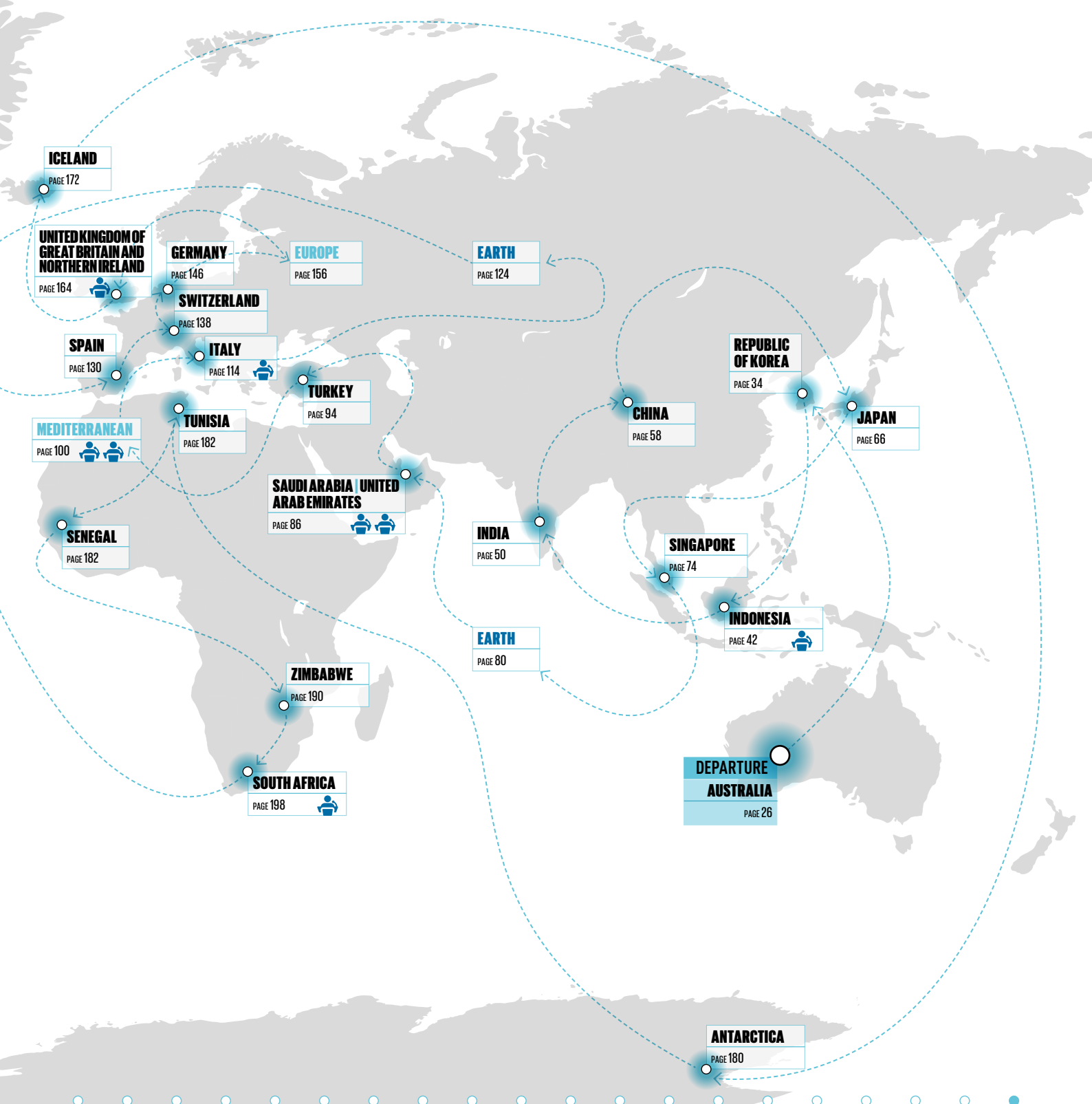
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A successful 24-hour global marathon for sustainability brought together more than 144 expert voices in 34 main work sessions across the world - in English, French, Spanish and Italian.



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<i>Founder, After-Energy Global; Bites of Transfoodmation</i>		<i>Assistant professor, Higher Agricultural Education, École Supérieure d'Agriculture Mognane; Rural Economy Laboratory, National Institute of Agricultural Research of Tunisia (INRAT)</i>		<i>Community manager & communications strategist, Pretaterra</i>	
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<i>Founder, Djúpið</i>				<i>Food & Climate Shaper</i>	
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				<i>Co-founder & chair, Reboot the Future</i>	
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				<i>Deputy minister, Agriculture and Rural Development, Colombia</i>	
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				<i>Chair of the Board, PRIMA Foundation</i>	
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				<i>Manager & founder, The TechFood</i>	
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				<i>Senior advisor for Innovation to the Secretary of State, Obama Administration; visiting professor, Bologna Business School</i>	

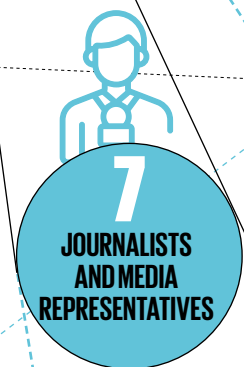
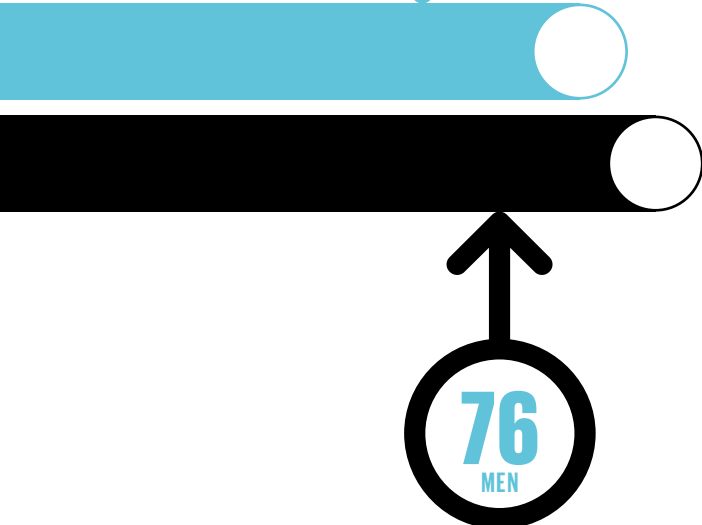
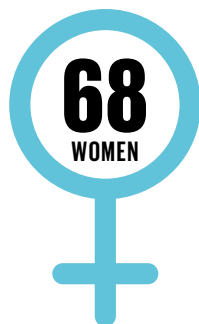
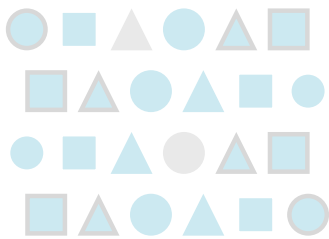
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<i>Sustainability advocate and member of Bites of Transfoodmation</i>		<i>President, Center for Research and Interdisciplinarity</i>		<i>University of Tuscia DIBAF; Nobel Peace Prize, 2007; member of Intergovernmental Panel on Climate Change</i>	
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<i>Founder and president, FFI</i>		<i>Co-founder, The Goya Journal</i>		<i>Permanent representative, Head of Delegation, Delegation of the European Union to the Holy See, the Order of Malta, the UN organizations in Rome and to the Republic of San Marino</i>	
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<i>Vice president, IFOAM Organics Asia</i>		<i>Director, Pacific Islands Leadership Institute HPU</i>		<i>Coordinator, Scaling Up Nutrition (SUN) Movement</i>	
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<i>Executive director, Crop Trust</i>		<i>CEO, Singapore Food Agency</i>		<i>Assistant professor, University of Bologna; founder, FFI</i>	
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<i>Researcher, School of Agriculture, Food and Wine, University of Adelaide</i>		<i>Minister for Agriculture, Land Reform and Rural Development, South Africa</i>		<i>Director, Partnerships and UN Collaboration, FAO</i>	
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<i>Deputy Director-General, FAO</i>		<i>Chief economist, FAO</i>		<i>Former chair, United Nations Permanent Forum on Indigenous Issues (UNPFII)</i>	
SHONHAI Gracious R.	193	TRAVERSA Enrico	70	YANG Qingwen	63
<i>Founder, Masvegas goats</i>		<i>Science and Technology counsellor, Embassy of Italy, Japan</i>		<i>Professor, Institute of Crop Sciences, Chinese Academy of Agricultural Sciences (CAAS)</i>	
SHUMONERAY Sumantra	152, 153	TRICE Rob	230	YANGUI Ahmed	186
<i>Founding chair & executive director, NNEdPro Global Centre for Nutrition and Health</i>		<i>Founder, Better Food Ventures</i>		<i>Associate professor, INRAT</i>	
SINGH Param	53	TRIGUEIRO Helena	152, 153	ZACCHIROLI Benedetto	107
<i>Founder & CEO, MooFarm</i>		<i>Global strategist, NNEdPro Global Centre for Nutrition and Health</i>		<i>President, ICCAR</i>	
SJAHRIR Kartini	45	TROCCOLI Carmelo	83		
<i>Senior advisor for Climate Change Issues to the Indonesian Coordinating Minister for Maritime Affairs and Investment</i>		<i>Director, Campagna Amica</i>			
SMERILLI Alessandra	161	TUREKIAN Vaughan	209		
<i>Secretary ad interim, Dicastery for Promoting Integral Human Development</i>		<i>Policy and Global Affairs Division executive director, US National Academy of Sciences</i>			
SPADONI Cristiano	205	TURKSON Cardinal Peter K.A.	287		
<i>Business strategy manager, Image Line</i>		<i>Prefect, Dicastery for Promoting Integral Human Development</i>			
SULISTYAWATI Eva	46	TUROW-PAUL Eve	215		
<i>Program development manager sustainable food</i>		<i>Founder & executive director, Food For Climate League</i>			

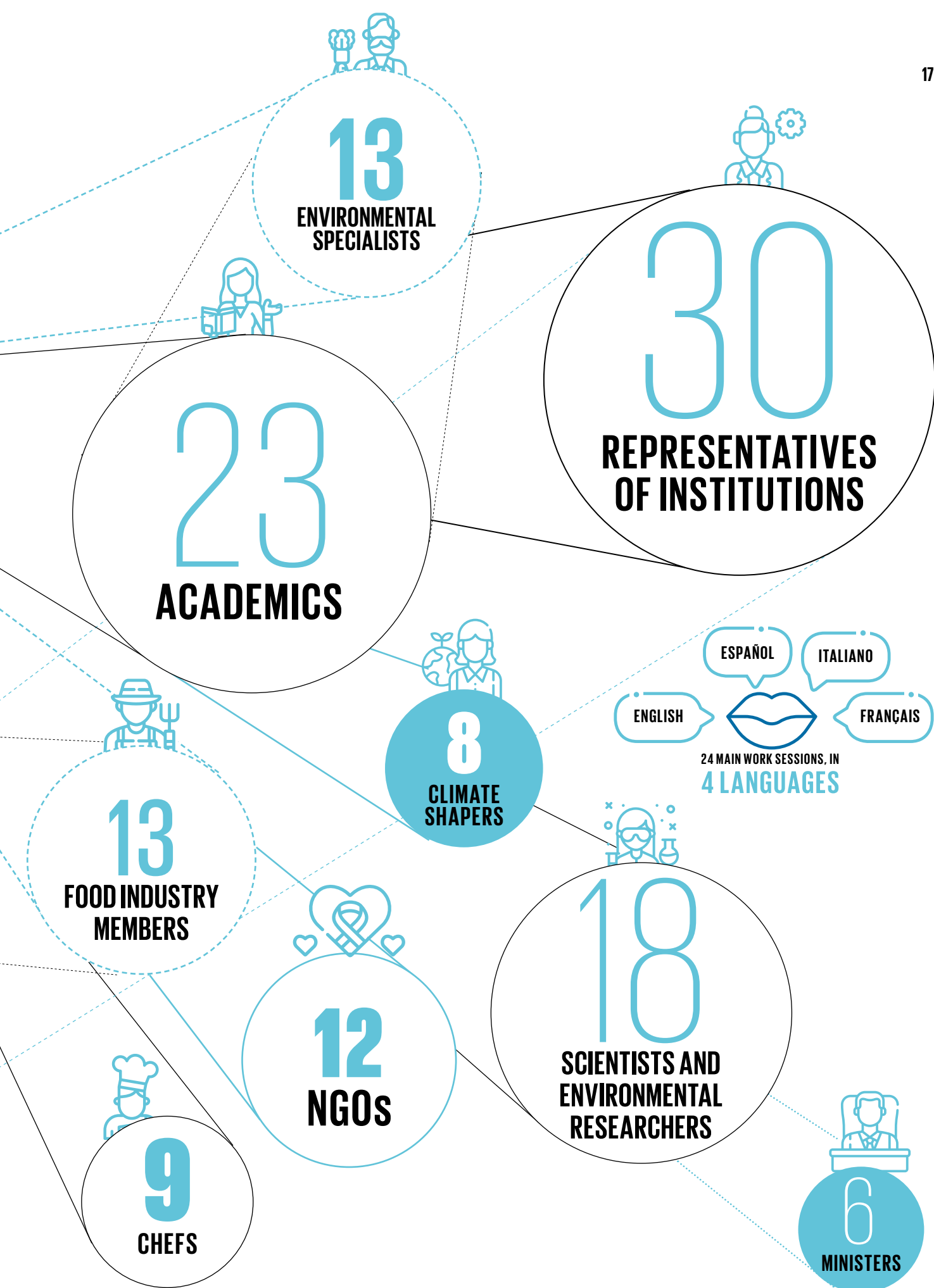
THE NUMBERS

A groundbreaking event
for sustainability that
brought together:

MORE THAN

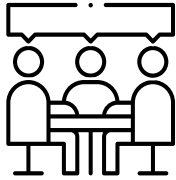
36
NATIONS





20

MODERATORS



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



Chris Krause
Director, Kyobashi Living Lab,
FFI Japan

SESSION | JAPAN



Dongxin Feng
Chief, Partnerships and
UN Collaboration Division, FAO

SESSION | CHINA



Sara Roversi

Founder and president, FFI

SESSION

> AUSTRALIA > REPUBLIC OF KOREA
> EARTH1 > SAUDI ARABIA | UNITED ARAB
EMIRATES > MEDITERRANEAN > ITALY
> EARTH2 > EUROPE > ANTARCTICA
> SOUTH AFRICA > WASHINGTON, DC
> COSTA RICA > CANADA > HAWAII



Amanda Katili Niode

Chair, Omar Niode Foundation

SESSION | INDONESIA



Elizabeth Yorke

Co-founder,
Edible Issues

SESSION | INDIA



Anusha Murthy

Co-founder,
Edible Issues

SESSION | INDIA

20 MODERATORS



Adam Lyle
Executive chairman,
Padang & Co Pte Ltd

SESSION | SINGAPORE



Semi Hakim
Co-founder,
K k Projekt

SESSION | TURKEY



Cristina Petracchi
Leader, FAO eLearning
Academy

SESSION
> GERMANY
> TUNISIA | SENEGAL



Mercy Chatyoka
Founder, Pick It
Fresh Farm

SESSION | ZIMBABWE



● José De la Rosa

Gastronomic scientist and R&D,
Food Alchemist Lab, FFII

SESSION

> SPAIN > MEXICO

> DOMINICAN REPUBLIC

> ARGENTINA | COLOMBIA



● Anthony Bennett

CEO, Reboot the Future

SESSION | SWITZERLAND



● Yannick Fiedler

Programme coordinator, FAO

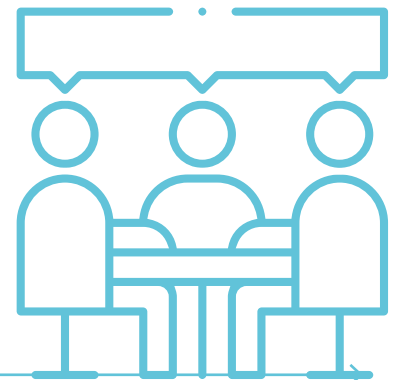
SESSION | TUNISIA | SENEGAL



● Gunnar Ólafsson

Founder, Djúpið

SESSION | ICELAND



2020 MODERATORS



Claudia Laricchia
Head, Institutional Relations
and Global Strategic
Partnerships, FFI

SESSION | UNITED KINGDOM OF GREAT
BRITAIN AND NORTHERN IRELAND



Eve Turow-Paul
Founder, Food For
Climate League

SESSION | NEW YORK



Julia Dalmadi
Director of Community
Programs, FFI

SESSION | BRAZIL



**Yon Fernandez-
de-Larrinoa**
Head of Unit, Indigenous
Peoples Unit, FAO

SESSION | CHILE



 Chiara Cecchini

CEO & co-founder,
Future Food Americas

SESSION | SAN FRANCISCO

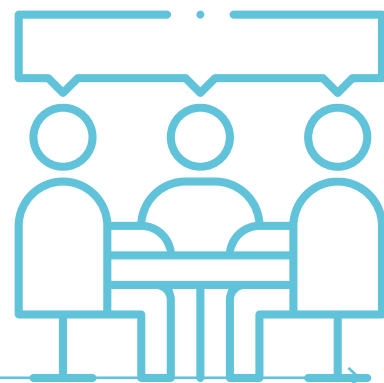


 **Tim West**

Slow Food chef, social
entrepreneur & food futurist

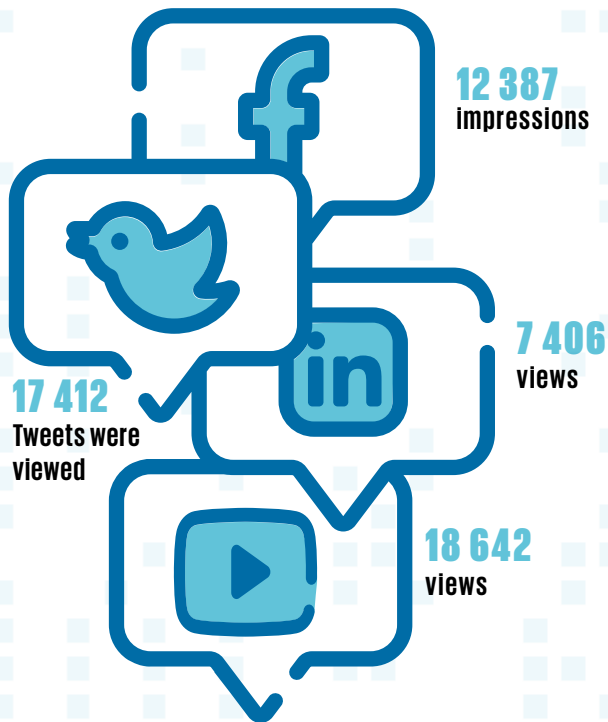
SESSION | SAN FRANCISCO

« The marathon saw a gathering of competent, reliable and dedicated professionals who dedicated time, effort and energy to moderate the sessions and encourage dialogue on sustainability. »



THE RESULTS

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



The Future Food Institute and FAO eLearning Academy marathon stood out on social media, doubling its total shares compared to the past year. By addressing everyday people's challenges, besides high-level policy issues, the online storytelling of the event tapped into people's innate sense of empowerment as an audience that can impact change, driving robust social engagement.



MORE THAN

20 000

SOCIAL MEDIA SHARES



ARTICLES

A constellation of national and international press agencies and magazines covered the initiative, enriching users' digital journey with offline touchpoints able to appeal to an even wider audience, generate a strong ROI and provide opportunities for integration.

CONTRIBUTIONS

36

COUNTRIES
INVOLVED

30

INSTITUTIONAL
REPRESENTATIVES

164

TOTAL
SPEAKERS

MORE THAN

150 000
VIEWS WORLDWIDE

The most-viewed sessions include:

China with over **10 268** viewsAustralia with over **7 240** viewsHawaii with over **5 337** views.

AN AVERAGE OF

6 000

FOLLOWERS EACH SESSION

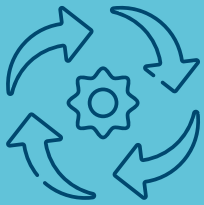
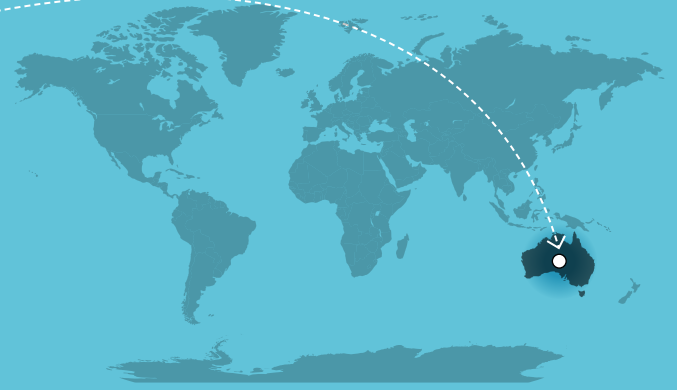
The global FoodFor for Earth community was proactive and strongly interested in the topics covered during the sessions. The impressive mélange of out-of-the-box thinkers and speakers made users interact and enjoy the live discussion, while promoting user-generated content and positive word-of-mouth about the marathon.



SESSION AUSTRALIA

05.00 hours [GMT+2]

13.00 hours [GMT+10]



CIRCULAR LIVING

Paradoxes in food systems environment and health

- Paul Newnham • Taking care of the climate from the kitchen
- Sandro Demaio • Changing food systems for better nutrition through convivial alliance
- Caterina Selva • Let's fight food waste in Australia
- Julia Dalmadi • Food & Climate Shapers: the future force of our global food system
- Lara Kennett and Rabih Hamid • Intergenerational collaboration for human and planet well-being

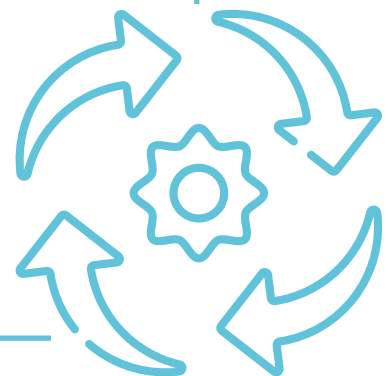
MODERATOR | **Sara Roversi** | Founder and president, FFI



MODERATOR | Sara Roversi | Founder and president, FFI

The opening session of the Food for Earth 2021 marathon started in Australia and mainly focused on the importance of optimizing the scarce resources we rely on.

This issue was approached from several topics, such as the awareness of the importance of healthy agrifood systems, the seriousness of food insecurity and malnutrition, and the big challenges of food waste.





Taking care of the climate from the kitchen

Paul Newnham

Director,
SDG2 Advocacy Hub;
founder, Chefs'
Manifesto

- The Chefs' Manifesto is a network of 1 000+ chefs from over 90 countries empowering chefs to be advocates for the UN Sustainable Development Goals, promoting good food for all as well as food systems transformation. Chefs are at the heart of food systems, sitting between farm and fork.

They have the power to influence directly along the food chain, from producers right through to consumers. What and how people eat, the way food is grown and processed, and the way the industry packages and sells the food has a major impact on the Earth and people's health. We all have a part to play in creating equitable food systems and accessible, nutritious food for all people. The role chefs can play as agents of change to help make a difference is critical. It helps make accessible the education and awareness necessary for people to understand how they too can play a part in transforming food systems.

Mr. Newnham is also the director of the SDG2 Advocacy Hub, whose mission is to connect, convene and catalyse NGOs, agricultural networks, nutritionists, campaigners, civil society, the private sector and UN agencies, coordinating advocacy efforts to achieve SDG2 by 2030. In 2021, the hub mobilized a special public engagement campaign titled Good Food For All (#GoodFood4All) for the UN Food Systems Summit 2021.

Through it, they gathered all people together to understand the connection between the food choices they make and the impact on the planet, encouraging change-making and becoming a part of the solution. Everyone has different views on what it means to have good food, and there is more than one definition. The invitation is for everybody to bring their ideas; to achieve a shared understanding between cultures, stories and experiences; and to be part of this conversation.

> What and how people eat, the way food is grown and processed, and the way the industry packages and sells the food has a major impact on the Earth and people's health. <



Sandro Demaio

CEO, VicHealth

Changing food systems for better nutrition through convivial alliance

- A diet that prioritises human health, environmental sustainability, connection to culture, sharing of food and enjoyment is one that should be accessible to everyone all over the world. While some call this a Mediterranean diet, others refer to it as flexitarian eating habits. Many countries and communities have their version of this diet, which centres human and planetary health. Action is needed to ensure that enjoying this way of eating is easily attainable for all.

We live in a world where about 830 million people wake up hungry every morning, and that number is on the rise once again after decades of its steady decrease. Hunger is once again on the rise though we are in a world that has never been richer or more interconnected, nor has had so much technology and globalization. At the same time, about 2.1 billion people suffer from being overweight or obesity, struggling to find access to and be able to afford enjoy quality food.

About one-in-five to one-in-four young people around the world are hungry for such a long period early in lives that their bodies don't fully develop – affecting their development intellectually and physically. Malnutrition is everyone's challenge, and there is no country that is immune. There must be awareness around our need to act as a collective, with governments implementing clear and concrete policies in a way that ensures everyone a high-quality diet and a good quality of life. Only secure and healthy food systems at a global scale could face the modern challenges, starting from climate change to new pandemics.

> Hunger is once again on the rise though we are in a world that has never been richer or more interconnected, nor has had so much technology and globalization. <



Caterina Selva

Researcher,
School of Agriculture,
Food and Wine,
University of Adelaide

Let's fight food waste in Australia

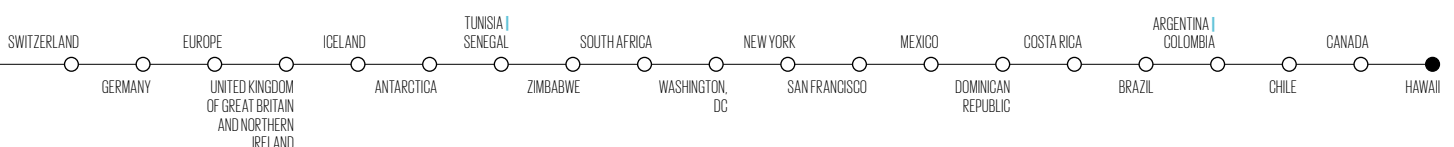
- Data from 2018 shows that one in four people worldwide is facing food insecurity, which means that they lack secure access to enough healthy foods. At the same time, at least one-quarter of the food that we produce is being wasted, more than 90 percent of which is coming from agriculture. This generates an important environmental cost, as 25 percent of all the water used in agriculture globally ends up in growing food that is ultimately thrown away. Even more sadly, food waste is responsible for at least 6 percent of global greenhouse gas emissions, so it becomes quite clear that food waste is a worldwide issue that has significant economic and environmental costs regardless of the country.

In Australia alone, food waste is costing the economy around AUD 20 billion, with more than 7 million tons of food being wasted each year. At the moment, there are three major uses for biomass waste from agriculture. It is either burnt to produce energy by combustion, used as composting material or used as animal feed. Even with these alternatives, 90 percent still ends up in landfill, wasting a huge amount of resources.

The Australian Government has set an objective to reduce its food waste by 50 percent by 2030, in line with the UN Sustainable Development Goals and supporting local research centres to achieve these objectives. These initiatives can be summarized into three main concepts: reduce food waste across the supply chain, transform unavoidable waste into innovative products and engage with the industry and the community to deliver behavioural change.

> In Australia alone, food waste is costing the economy around AUD 20 billion, with more than 7 million tons of food being wasted each year. <

The transforming aspect of the projects is the most innovative. This involves collecting biomass waste, which is a complex mix of many substances, and then using laboratory techniques and industrial facilities to separate the individual components. The chemical properties of each component can then be used to develop high-value products. The aim is to maximize the value of food waste and build a circular economy while minimizing the environmental impact by 2030.





Julia Dalmadi

Director,
Community Programs,
FFI

Food & climate shapers: the future force of our global food system

- The Future Food Institute's Food & Climate Shapers Boot Camps
- transformed the concept of education into an ongoing, collaborative, values-based process, with the ultimate goal of bettering humanity. In these boot camps, FFI, in partnership with FAO, catalysed knowledge around circular and sustainable agrifood systems by empowering climate shapers, connecting communities and innovating solutions to food system challenges. The boot camps include hands-on experience supported by a

series of masterclasses, discovery missions, open conversations, hackathons and FAO elearning courses to transfer knowledge, skills and competencies to strengthen the capacities of food system professionals. The experiential learning platform allows participants to engage in an international workshop environment composed of prototyping and teamwork-based innovation challenges, and understand the interrelatedness of production.

Lana Kennett



Intergenerational collaboration for human and planet well-being

- Food Planet was born during the Food & Climate Shapers Digital Boot Camp run by FFI and FAO. Modern life is putting pressure on the relationships that children and families have with food, how it is grown and the health of the environment that it comes from. Education, collaboration and regenerating the health of our food system are major levers for climate action. Food Planet empowers kids and their families to shape the future of our food system via a combined

educational gaming and offline experience. Its aim is to create a healthy future for the planet and its people by building intergenerational collaboration and delivering climate shaping education. Food Planet is a combined mobile gaming app and offline education platform for primary and intermediate schools. The learning experience is underpinned by evidence-based pedagogy and is driven by the UN SDGs.

Rabih Hamid

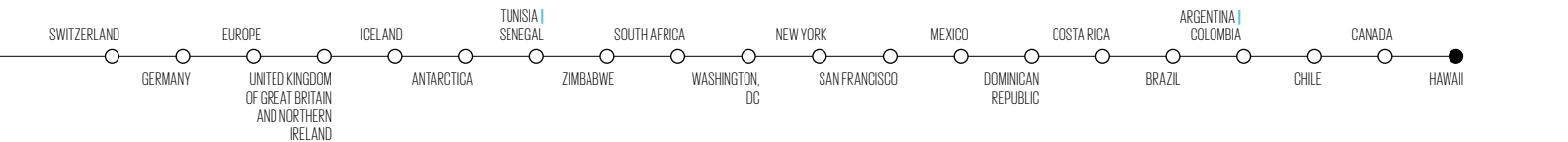
Food & climate shapers

Highlights

- The way people eat, the way food is grown and processed, and the way industries package food can have a major impact on the Earth and on people’s health, and it is important to be thinking and talking about that.
 - We live in a world where about 830 million people wake up hungry every morning, and that number is on the rise once again after decades of decreasing.
 - Malnutrition is everyone’s challenge, and there is no country that is immune.
 - At least one-quarter of the food that we are producing is being wasted, and more than 90 percent of this is coming from agriculture.
- This is generating a significant environmental cost, as 25 percent of all the water used in agriculture globally goes towards growing food that is ultimately thrown away.



©Unsplash/Henrique Felix



SESSION **REPUBLIC OF KOREA**

6.00 hours [GMT+2]

13.00 hours [GMT+9]



CLIMATE SMART ECOSYSTEM

Food sustainability: from farm to fork

- Sanghyun Lee • Transboundary water-energy-food nexus
- Pil Joo Kim • Soil is a hidden weapon to mitigate global warming
- Jong Rok Jeon • Nature-derived crop stimulants for sustainable agriculture

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



MODERATOR | Sara Roversi | Founder and president, FFI

The Republic of Korea session comprised of interesting topics analyzing food systems from the development and management of sustainable improvements for agricultural methods to dynamic systems that can help us measure “virtual water” concepts, from food production to food consumption.





Transboundary water-energy-food nexus

Sanghyun Lee

Assistant professor,
Chungbuk University,
Republic of Korea

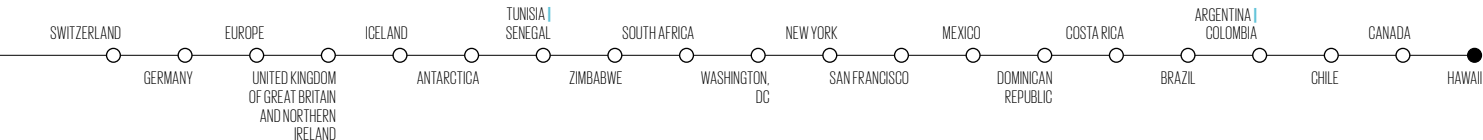
The concept of transboundary resource security, based on trade-offs among other resources and stakeholders, is a crucial topic to analyse nowadays given its strict relation with the achievement of SDGs. Understanding the deep interlinkages between food, water and energy (WEF) is crucial to guarantee a sustainable food security system, especially considering climate, socio-political, economic and population stressors. Both physical and virtual boundaries contribute to a new concept of resource-sheds and system dynamics approaches able to have holistic, transboundary impacts.

To increase or maintain high levels of food security, there is a need to secure other resources. Thus, there is a need to research water, to research energy, to research land – and there is a need to analyse the impact of food security in terms of transboundary dynamics. This is key to securing the necessary resources to achieve food security in the future. At the same time, it will enable us to study future climate change through future water and food prints.

The concept of virtual water can also be thought of as the potential to know how much water leaves water basins in producing areas and is transported to consuming areas, and how the the need for food security affects physical water flows.

In conclusion, the transboundary WEF nexus includes the interlinkages among these resources, due to the existence of a new food boundary combining food trade, virtual water and water resources. At the same time, there is a new transboundary perspective combining the research of water, energy and food sharing, and an important need to start taking into consideration the value of these resources.

> Understanding the deep interlinkages between food, water and energy (WEF) is crucial to guarantee a sustainable food security system, especially considering climate, socio-political, economic and population stressors. <





Pil Joo Kim

Professor,
Division of Applied Life
Science, Gyeongsang
National University,
Republic of Korea

Soil is a hidden weapon to mitigate global warming

As a carbon (C) sink, soil is a key compartment for climate regulation. Thus, soil C sequestration strategies should be considered alongside reduction strategies for other greenhouse gas (GHG) emissions. Approximately 830 gigatons of C is present in the atmosphere, however in the land there are more than nine times higher amounts of C. Around 2 400 gigatons of C is accumulated in the soil globally as organic C. In the soil surface, vegetation also has similar levels of C to the atmosphere.

These numbers demonstrate that the agricultural sector, such as surface soil and plant management, could be very important in controlling atmospheric carbon dioxide (CO₂) as well as global warming. To mitigate global warming, soil C stock increase in the agricultural ecosystem can be one of the key tools. Carbon stock change can be estimated using C balance, which is the difference between C input and output, and this tool can help to estimate the amounts of accumulated or depleted C in the soil.

To increase soil C stock, greater organic matter addition and less decomposition are essential.

However, applied organic amendment in the flooded rice paddies can increase methane (CH₄) emission. Methane should be the most pursued clean-up species, due to the fact that it has a global warming contribution potential more than 23 times greater than that of CO₂.

Methodologies to reduce CH₄ emission are being improved, such as irrigation water management to increase oxygen concentration in the soil. Continuous application of stable organic matter, like compost or biochar, can be important agricultural practices to decrease CH₄ production as well as increase soil C stock in rice paddies. In the future, there are expectations of intelligent fertilization management as a way to decrease CH₄ emission through the addition of specific new technologic inhibitors.

> ... the agricultural sector, such as surface soil and plant management, could be very important in controlling atmospheric carbon dioxide (CO₂) as well as global warming. <



Jong-Rok Jeon

Associate professor,
Gyeongsang National
University,
Republic of Korea

Nature-derived crop stimulants for sustainable agriculture

- Chemical fertilizers and intensive methods to increase crop productivity have several disadvantages regarding low nutrient use efficiency and eutrophication. There is thus a need for more sustainable agriculture methods and more eco-friendly materials to enhance crop productivity.

Humic substances (HSs) are chromogenic organic assemblies found in the environment, including soils, rivers and oceans, and can have diverse functions involved in microbial respiration, pollutant transformation and heavy metals availability. Most importantly, HSs can facilitate plant growth by conditioning soil textures and directly stimulating plants, thus resulting in enhanced soil quality and crop productivity.

The main way to source low-grade coals such as leonardite is to extract them in bulk for agronomical and commercial purposes, but natural resources are unevenly distributed and limited in terms of quantity. As a potential solution to this problem, plant waste-derived HS analogues are being developed. In particular, lignin obtainable in bulk from paper manufacturing and wood fermentation processes could be structurally transformed, thus recreating the beneficial plant actions of HSs, because structural similarities between both the materials are observed. For instance, high-molecular-weight lignin is fragmented by Fenton-based oxidations, while oxygen-based functional groups and iron species are introduced.

Low-molecular-weight lignin phenols are oxidatively polymerized to give rise to highly cross-linked structures bearing diverse oxygen-based side groups. Given that plants are renewable and HSs are nature-derived crop stimulants, these strategies will be a promising way to replace conventional chemical crop fertilizers.

> Humic substances (HSs) are chromogenic organic assemblies ...

... and will be a promising way to replace conventional chemical crop fertilizers. <

| Highlights |

- There is a need to really understand the interlinkage between food, water and energy in order to achieve the most sustainable food security system, especially with climate change and the socio-economic changes happening in the world today.
- Soil is the most important and real target for managing carbon dioxide emissions that concentrate in the atmosphere. The analysis of the soil carbon relation is a key for a better future.
- Plant-derived humic substances are being developed to improve sustainable agricultural methods. Humic substances are an eco-friendly alternative to improve crop stimulation by using natural derived materials instead of chemical fertilizers, creating more sustainable agricultural practices.



© Unsplash/Melanie Schwartz



VIDEO CONTRIBUTIONS

Alec Ross

Senior advisor for Innovation to the Secretary of State, Obama Administration; visiting professor, Bologna Business School



CLIMATE-SMART
ECOSYSTEM

Precision agriculture: how technology can rescue farming



In four years, the actual number of network devices in the world is going to grow from 35 billion to 75 billion, and we are creating an ocean-worth of data into industries that we don't necessarily think of being digital, like agriculture. So, the question is: How can we use really powerful tools in artificial intelligence, machine learning, robotics and data to help address problems of waste and help maximize the productivity of our land to feed more people in a healthy way? **We can feed the future more sustainably with less waste and with greater abundance through precision agriculture: the combination of big data analytics into the process of farming.**

For a healthier future, we need computer scientists to work ever more closely with people in agriculture to figure out how we can use these tools to make the earth more productive. Alec Ross reported the example of a beef and dairy farm in the northern part of New Zealand, an area with 80 000 inhabitants and 7 million cows. Farmers started to use a combination of laser technology, GPS and data analytics to practice more precise farming. Within one year, the amount of water they used was reduced by 70 percent, the amount of fertilizer was reduced by more than 50 percent, and their allocation of different types of nitrogen and phosphorus-based fertilizers were reduced in a way that created substantially less spill off.

Innovation can oftentimes be distant. It can be something that dehumanizes us, especially as machines become almost increasingly sentient and take on properties that we associate with human beings. But if we can take our most human imperative, to feed ourselves, and try to figure out how to use all of the very powerful digital tools we have at our disposal to produce more food with less waste and a lower carbon footprint, then we can have a healthier future. The hope is that these communities will work together more closely as we follow the path towards a more sustainable and fair production system.

SESSION INDONESIA

07.00 hours [GMT+2]

12.00 hours [GMT+7]



FOOD IDENTITY

Climate change is at the end of your fork

- Dr. Kartini Sjahrir • Women's participation in economy as part of family food security
- Eva Sulistyawati • The Local Harvest: promoting sustainable and equitable food systems in Indonesia
- Mohamad Reyza Ramadhan • Sago starch utilization
- Meilati Batubara • Climate-friendly Batak Food

MODERATOR | **Amanda Katili Niode** | Chair, Omar Niode Foundation



MODERATOR | **Amanda Katili Niode** | Chair, Omar Niode Foundation

This session highlights the importance of local knowledge, wisdom and cultures in every single place of the world.

With an eye on Indonesia, we can learn from and use the great respect for nature that traditions have as potential development platforms.

At the same time, we see the essential role of women in these traditional communities, who should be promoted and empowered for a positive future.





INSTITUTIONAL CONTRIBUTIONS



Women’s participation in economy as part of family food security

Kartini Sjahrir

Senior advisor for Climate Change Issues to the Indonesian Coordinating Minister for Maritime Affairs and Investment

> In Indonesia, women are a powerhouse for food security, not only for their families but also for their communities. <

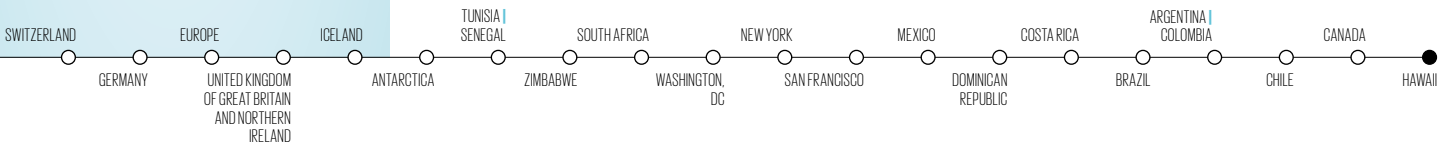
According to the Paris Agreement of 2015, gender equality and empowering women are key goals to achieve. In Indonesia, women are a powerhouse for food security, not only for their families but also for their communities. Indonesia is the largest archipelagic country in the world, with more than 17 000 islands and around 74 percent of its size being represented by the sea. Its economy depends significantly on the coastal areas and the ocean. Demographically speaking, 140 million out of 265 million Indonesians are living in coastal areas, of whom 30 million are women engaging in blue economy activities.

There are also around 15 ethnic groups, each of them with their own traditions, making their living on local wisdom and knowledge and managing their daily social economic activities over centuries, from generation to generation. In this way, they have been guaranteeing the food security of their communities, where access to governmental facilities has always been difficult.

The role of women in achieving this food security in the coastal areas has always been crucial, both taking care of the household, as well as helping with the construction of all tools needed for fishing activities – or actively engaging with fishing themselves.

During the last decades, women also started generating new incomes for their communities, managing ecotourism projects, creating new fruit plantations and developing salted fish products. None of these activities get support from local government nor are they recognized as paid jobs simply because they are performed by women in and around the house.

Local knowledge and wisdom should be preserved and strongly promoted. The national, regional and local governments need to become strategic partners in the effort to empower women, considering the importance of their activities in coastal areas.





Eva Sulistyawati

Program development
manager sustainable
food

The Local Harvest: promoting sustainable and equitable food systems in Indonesia

- The Local Harvest consortium is supported by the European Union, the Indigenous People Alliance of the Archipelago, WWF Indonesia, the Non-Timber Forest Product Actions Programs Indonesia, and the Association for Women in Small Business.

Its commitment is to ensure equity rights and cultural appropriateness of participation when regarding integration with food systems, as well as promoting inclusive, fair change and generating value for every actor in the chain, especially those who are often marginalized, such as indigenous groups. The project has four essential principles: to be local, healthy, fair and sustainable.

In 2019, the Eat Lancet Commission said that global food production threatens climate stability and ecosystem resilience, being that it is already considered the single major driver of environmental degradations.

The commission remarked that the increasing world's population will result in increasing food consumption, while agricultural and forest land will not increase. In this scenario, Indonesia has great potential in its rich and diverse supply of local resources, which can be developed to form a foundation of food security in the long term. This can be done alongside respect for the agro biodiversity of food sources and cultivars, and with the traditional knowledge of our farmers.

The Local Harvest is working to transform the food system and maintain its resilience, securing food availability and quality of nutrition for all. Positive changes in food consumption, production and distribution are crucial to ensure that food sources are available for future generations.

Biodiversity is essential for a sustainable and inclusive food system, one that respects nature and values local diets and the cultural dimension of foods.

> Indonesia has great potential in its rich and diverse supply of local resources, which can be developed to form a foundation of food security in the long term. This can be done alongside respect for the agro biodiversity of food sources and cultivars, and with the traditional knowledge of our farmers. <



Mohamad Reyza Ramadhan

Programme officer,
FAO Indonesia

Promoting sago starch utilization

- FAO Indonesia has been collaborating with the Ministry of Agriculture since 2016 to find and promote alternative carbohydrate sources for communities. One of the valuable commodities Indonesia has is sago, a palm tree from which a starch can be extracted for food production. Sago starch consumption in Indonesia offers a significant opportunity to contribute to the elimination of food insecurity.

The project was started in Southeast Sulawesi as it is considered the largest sago area in the country after Papua, with more than 5 000 hectares of sago farms. For generations, people in the province have harvested and consumed wild sago trees from the forest. However, FAO has pioneered a commercially viable form of cultivating it by training farmers:

- ➔ to develop an agro-economic approach, ensuring better productivity and quality;
- ➔ to build an integrated hygienic and no-waste sago processing unit; and
- ➔ to create an integrated business unit that manages sago farming, processing and marketing.

The project also constructed a water canal and introduced better water management skills in the area, as well as replanting techniques. At the same time, the project built two small-scale factories in the area. These are permanent facilities for local farmers to process sago and generate a proper product in a more sustainable and hygienic environment, with good manufacturing practices using filtered water.

Nowadays, there exists a business unit called Sago Meambo Food, with fine sago flour and sago-based food (chips, biscuits, etc) as their final products. These are sold to different companies implementing the use of sago and commercializing such products for the market.

Another great success of the programme, that was finalised in March 2019, is the Ministry of Agriculture expanding and scaling the project to almost all of the country through its Food Security Agency. This generated at least 50 different points in Indonesia to promote carbohydrate sources besides rice using the same methodology.

> Sago starch consumption in Indonesia offers a significant opportunity to contribute to the elimination of food insecurity. <



Meilati Batubara

Co-founder,
Nusa Indonesian
Gastronomy Foundation

Climate-friendly Batak food

Indonesia's traditional food culture is very sustainable. There exist different values, both in the land and in the kitchen, that the Indonesian culture respects and should promote to maintain its roots of sustainability and health.

Regarding the framing values, the first one is the conservation of the agricultural methods that are used. This involves maintaining centurial traditional values, working the land with respect and with a completely organic approach still used by the great majority of the country. The second value is the interesting crop diversity and rotation with which the farmers manage their lands. They have profound knowledge in respecting the soil with a holistic pest management, rotating crops and letting land lay fallow.

The third value is the free range for livestock in which, traditionally, the farmer set the livestock free for complete, unbound growth, and has been applied for centuries. The fourth remarkable value is the holistic pest management: traditional cultures are used to harvesting based on astronomy and, following the time of Mother Earth, they share the land with insects, which are considered humans who need food themselves.

As regards the kitchen values, there are also traditional cultural approaches that make the Indonesian cuisine very sustainable and Earth friendly. In the first place, Indonesian food is historically plant based, making the most of the great diversity of plants that can be found in the land, and promoting it, instead of single crop farming. A second remarkable issue is that most of the plants grow in organic land with organic farming. A third value is in the traditional waste management of the Indonesian house, where there is a zero-waste situation because everything goes back to the farm to feed the livestock.

> Indonesian food is historically plant based, making the most of the great diversity of plants that can be found in the land, and promoting it, instead of single crop farming. <

Highlights

- Local knowledge and wisdom should be preserved and strongly promoted.
- Positive changes in food consumption, production and distribution are crucial to ensure that food sources are available for future generations. Biodiversity is essential for a sustainable and inclusive food system, respecting nature and valuing local diets together with the cultural dimension of foods.
- Indonesia's traditional food culture is very sustainable. There exist different values, both in the land and in the kitchen, that the Indonesian culture respects and should promote to maintain its roots of sustainability and health.

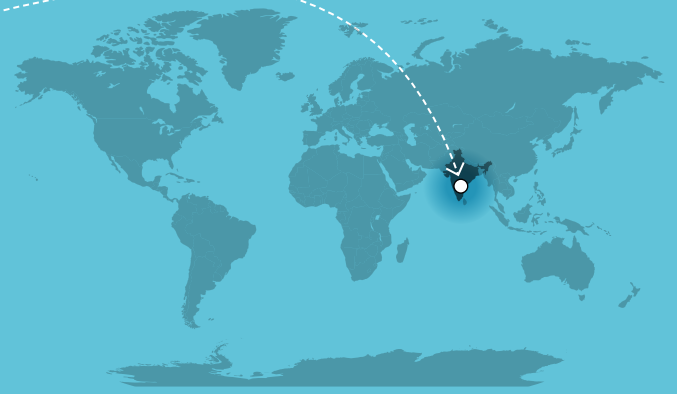


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SESSION **INDIA**

08.00 hours [GMT+2]

11.30 hours [GMT+5.5]



FOOD IDENTITY

Edible issues: from culture to agriculture

Param Singh
Sheetal Patil
Anisha Oomen
Aysha Tanya

Panel discussion

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



MODERATORS | Anusha Murthy and Elizabeth Yorke

Co-founders, Edible Issues

India's session talked through the nexus and interdependence of a territory's agriculture and culture.

During the panel, there were deeply rooted discussions on how to revisit and recuperate local knowledge and traditions, as well as how to link this to modern technology and the crucial role of women in order to achieve good results.



PANEL DISCUSSION

Edible issues: from culture to agriculture



Param Singh

Founder & CEO, MoooFarm



Sheetal Patil

Senior researcher
& data analyst, School
of Development, Azim
Premji University



Anisha Oomen

Co-founder,
The Goya Journal



Aysha Tanya

Co-founder,
The Goya Journal

PANEL DISCUSSION

> Although culture is celebrated when food systems topics are approached, it is often overlooked, and it needs to be seen in a holistic and collective way. <

> Balancing tradition with modernity, respecting ancient knowledge and making the most and best of the opportunities that technology gives the system can help generate more sustainability in the entire ecosystem. <

- Edible Issues started its activity at the Food Innovation Program of 2018 created by FFI. Since then, it has been researching the Indian food system. There are an array of forces that shape and affect Indian eating habits: agriculture, politics, trade approaches, environment and most of all culture. Given the vast and historic cultures, there are plenty of issues to move on from and lessons to learn regarding sustainability, nutrition and knowledge about resources.

Although culture is celebrated when food systems topics are approached, it is often overlooked, and it needs to be seen in a holistic and collective way, talking about all the edible issues from agriculture to culture.

Agriculture and its allied systems are embodiments of deep culture in India. Embeddedness of culture in agriculture brings it not only closer to humans but it ties many humans closer to each other.

Food consumption is one of the major cultural dimensions of agriculture, and apart from food, agriculture also provides income and employment to about 60 percent of people on Earth. Combining crops and livestock production, agriculture blends social and environmental systems intricately.

However, over the past several centuries, the evolution in agriculture is marked by complex dynamics between economic, political, environmental and social domains of development. Transitions from traditional to modern agricultural practices have slowly broken the link between culture and agriculture, making it predominantly a profession exclusively for profit while heavily relying on common natural resources. From being a way of life to the majority of people, agriculture transformed into an economic and business model.

The transformations in agriculture have brought not only the deterioration to natural commons like soil, water and biodiversity, but it has also contributed to increasing risks to human health and nutrition, social organizations or networks, and safety nets.

At the same time, there was a disconnection between agriculture and culture through these transformations, through the different land and water use, the lack of biodiversity in monocultures or the distant consumption of food.

> The transformations in agriculture have brought not only the deterioration to natural commons like soil, water and biodiversity, but it has also contributed to increasing risks to human health and nutrition, social organizations or networks, and safety nets. <

This disconnection is a great problem because it generates nutritional imbalances that lead to potential health issues. Also, less biodiversity can influence even more hunger and poverty, whilst the modern agronomy way of working the land is less sustainable and is harmful when it comes to climate change and global warming. Potential solutions are being developed through innovation in food systems, both by working in effective supply chains – to make food more accessible and affordable – as well as in alternative farming methods that lean towards utilizing agroecology, being locally suitable and respecting what can be done in each territory in order to achieve food security and food sovereignty in an economically viable way. There is a very promising and interesting restoration of traditional farmer values that will help this process.

The concept of cultural sustainability has to be created by revisiting practices from the past - both in agriculture and in the culinary realms, keeping it local and reconnecting people from the same regions who are disconnected today, as well as avoiding food traveling thousands of kilometres before returning where it was produced.

Balancing tradition with modernity, respecting ancient knowledge and, at the same time, making the most and best of the opportunities that technology gives the system, can help generate more sustainability, more transparency and more trust in the entire ecosystem.

There should also be a revaluation of women's role as custodians of culture and agriculture. Most of the work and burden of the household and much of farm work is on women's shoulders. They occupy crucial positions in the family, the agricultural system and the food system.

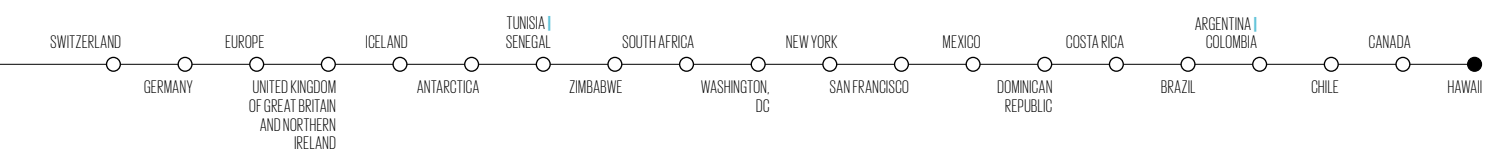
> There should also be a revaluation of women's role as custodians of culture and agriculture. <

| Highlights |

- There are an array of forces that shape and affect how people eat in India. While approaches to agriculture, environment, politics, trade, business and sustainability play a role, culture is an equally integral part of it. Given the vast and historic cultures, there are plenty of issues to solve and lessons to learn regarding sustainability, nutrition and knowledge about resources.
- Embeddedness of culture in agriculture brings it not only closer to humans but it ties many humans closer to each other. Food consumption is one of the major cultural dimensions of agriculture, and apart from food, agriculture also provides income and employment to about 60 percent of people on Earth.
- The concept of cultural sustainability has to be created by revisiting practices from the past - both in agriculture and in the culinary realms, keeping it local, and reconnecting people from the same regions that are today disconnected.



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SESSION CHINA

09.00 hours [GMT+2]

15.00 hours [GMT+8]



CLIMATE SMART ECOSYSTEM

Food for Earth: the importance of biodiversity and food waste management in food systems transformation

Qu Dongyu

FAO-China purposes and concrete actions in the decade of change

Shenggen Fan

Innovations in food systems

Qingwen Yang

Status and practices of agrobiodiversity conservation in China

Shengkui Cheng

Food loss and waste (FLW) in China

MODERATOR | **Dongxin Feng** | Programme coordinator, Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture



MODERATOR | Dongxin Feng | Programme coordinator,
Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture

The Chinese session focused on biodiversity, food loss and waste (FLW), and the transformation of food systems, highlighting the steps undertaken by the country towards the achievement of the 2030 Agenda.

Sustainability has been examined from economic, socio-cultural and political perspectives, finally reflecting on a systemic approach as the only one capable of driving the transition needed for both human and planetary health.





Qu Dongyu

Director-General, FAO

FAO-China purposes and concrete actions in the decade of change

- Sustainability is a fundamental concept and a cross-cutting theme throughout FAO's activities, interventions and initiatives. There are four crucial elements:
- adequate enabling policies for production, process, trade and investment;
- more investment in rural areas – e.g. improving broadband infrastructure, road accessibility and cold chain systems;
- a strong push for innovation and science – including social, institutional, financial and technological innovations – to produce new varieties based on biotechnology and on traditional breeding, and to use other innovative products and bio-products; and
- partnerships and new business models to maintain trade flow and the sustainable supply of food across regions, and strengthen related cooperation.

The State of the World's Biodiversity for Food and Agriculture global assessment clearly demonstrated that biodiversity is the essence of sustainable agrifood systems.

Developing policies and legal frameworks, strengthening institutions and building human capacity are essential. FAO is driving this through the FAO Strategy on Mainstreaming Biodiversity across Agricultural Sectors and in its role as the Biodiversity Mainstreaming Platform.

Another topic of global importance is food loss and waste: Reducing food losses and waste provides a powerful means to strengthen our agrifood systems and support sustainability.

FAO is supporting its members to move from advocacy to effective action and accountability by:

- supporting the formulation of policies and laws to reduce food loss and waste;
- collaborating with a wide range of partners to improve practices and apply innovations; and
- supporting efforts to transform consumers' attitudes, behaviour, preferences and habits – as they are key to the solution.

With its rich biodiversity and the concrete steps taken at all levels of governance and society to confront food waste, China is an example to follow, and the FAO-China South-South Cooperation Programme is a pillar of this global exchange.

The inclusion of developing a green economy as one of the key strategic priorities during the 14th Five-Year Plan for National Economic and Social Development (2021-2025) period is of great importance. Sustainable agricultural development and addressing food waste will surely become key contributors in this endeavour.

> China is an example to follow, and the FAO-China South-South Cooperation Programme is a pillar of this global exchange. <



Shenggen Fan

Dean, Global Food Economics and Policy, China Agricultural University

FAO-China purposes and concrete actions in the decade of change

- The food system is not just defined by every single actor involved along the value chain (from production to consumption), yet it is also identified by crucial externalities (e.g. natural resources, climate change, health, nutrition). Hence, it is much broader.

While facing many of the food system-related challenges – natural resources degradation, water pollution, hunger and malnutrition – the Chinese Government made many commitments on the health and natural resources sides in order to guarantee healthy nutrition to 1.4 billion people and achieve carbon neutrality by 2060.

Countries all over the world need to cooperate to change these four dynamics:

- ➔ **food system governance** – turning its vertical structure into an integrated mechanism able to holistically tackle the current challenges;
- ➔ **technology** – similarly, assure the technology of the future is able to tackle multiple, integrated objectives, since everything is connected;
- ➔ **policy** – repurpose the subsidies we are currently spending (USD 700 billion) to promote the production of healthy, nutritional and sustainable food through multiple wind technologies;
- ➔ **international collaboration** – whereas the current food system is dominated by developed countries in the Global North, emerging economies (China, Brazil, India) must be more involved in the conversation;
- ➔ **economists themselves need to embrace the food system approach** using econometrics and economic models to guide the food system transformation.

> While facing many of the food system-related challenges - natural resources degradation, water pollution, hunger and malnutrition - the Chinese Government made many commitments on the health and natural resources sides in order to guarantee healthy nutrition to 1.4 billion people and achieve carbon neutrality by 2060. <

Finally, every global citizen is asked to change their food behaviour in compliance with broader environmental issues.



Status and practices of agrobiodiversity conservation in China

Qingwen Yang

Professor, Institute of Crop Science, Chinese Academy of Agricultural Sciences

Given its 5 000 year history of agricultural production, and being one of the three origin centres of agriculture worldwide, China is recognized as having mega-diversity in its ecosystem, at species and genetic levels. China accounts for 780 varieties of livestock; more than 4 000 species of fish; 1 700 species of shrimp and crab; 90 species of cephalopods; and about 3 700 species of shellfish. Additionally, there are almost 1 340 species of cultivated crops and more than 1 900 species of wild relatives of crops. At present, more than 520 000 accessions of crop genetic resources are conserved *ex-situ*, whereas 217 are *in-situ*.

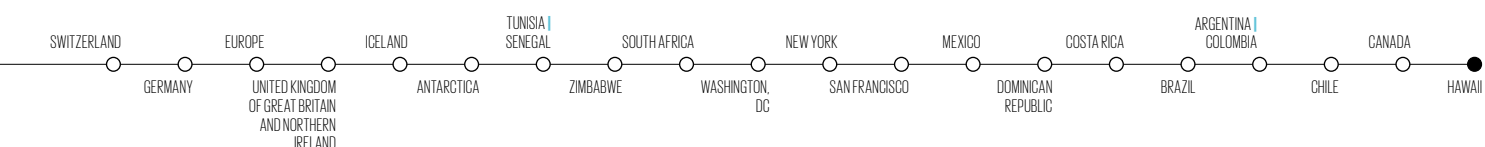
Chinese conservation of agrobiodiversity began in the 1950s, when more than 210 000 accessions of germplasm were collected and, since then, many laws and regulations have been issued to guarantee its maintenance. In the 1980s, 110 000 more accessions were collected and since 2015, 10 provinces have been collecting another 30 000.

The *ex-situ* conservation takes place in national or provincial gene banks: 440 000 accessions of genetic resources are currently preserved in the national facilities, whereas more than 1 million are under the provincial domain.

The *in-situ* conservation of wild relatives crops can be done through (i) physical isolation, using solid fences, brick walls or plant fences, or through (ii) the mainstreaming approach. The latter was proven to be effective during a project sponsored by GEF targeting wild relatives of rice. The overall strategy was based on establishing an incentive-oriented mechanism aimed at eradicating rice threat factors and through policy and financial incentives, as well as raising awareness and promoting alternative livelihoods to farmers.

From 2007 to 2018, farmers' income increased by nine-fold, young people could join nine new colleges and wild rice production was more prosperous.

> China is recognized as having mega-diversity in its ecosystem, at species and genetic levels. China accounts for 780 varieties of livestock; more than 4 000 species of fish; 1 700 species of shrimp and crab; 90 species of cephalopods; and about 3 700 species of shellfish. Additionally, there are almost 1 340 species of cultivated crops and more than 1 900 species of wild relatives of crops. <





Shengkui Cheng

Deputy director,
Institute of Geographic
Sciences and Natural
Resources Research,
Chinese Academy
of Sciences

Food loss and waste (FLW) in China

Food loss and waste (FLW) represent a critical issue for the sustainable development of most countries and it is a country-specific phenomenon.

In China, most FLW occurs in catering (41 percent), then retail (35 percent), households (13 percent) and processing (11 percent). In the EU, households represent the major source (42 percent), then processing (39 percent), catering (14 percent) and retail (5 percent).

In China, vegetables (38 percent), meat (28 percent) and cereals (24 percent) are the most lost and wasted. In the United States of America, vegetables (24 percent) are followed by dairy (29 percent), cereals (18 percent) and fruits (17 percent).

Deep diving into the current status of FLW in China, around 17-18 million tonnes of food is wasted each year in the urban catering sector, which is enough to feed 30 to 50 million people. Approximately 27 percent of China's total food produced for humans was lost and wasted each year in the whole chain from 2014-2018. Business banquets, social dining and events are among the top occasions of food waste, while one of the biggest issues is the waste occurring in schools and universities, an issue that educational institutions have overlooked for long.

Many studies have been conducted recently to investigate the problem, and complex historical, social and cultural reasons are hidden behind the food waste behaviour across the country (e.g. China has a long history of food culture, particularly related to its drinking culture).

From an institutional perspective, Chinese President Xi Jinping has firmly called for practicing thriftiness and opposing waste. The anti-food waste law was reviewed in 2020 and relevant ministries, local governments and industry associations are taking measures to comply with the law. Besides research efforts to analyse the phenomenon, thanks to enormous education, advertisement and media campaigns (both top-down and bottom-down), people's awareness and knowledge on food resources and knowledge have increased drastically.

A systemic approach is needed. For example, science can provide meaningful data that can lead institutions to tailor guidelines for restaurants, households and canteens, while media can empower people.

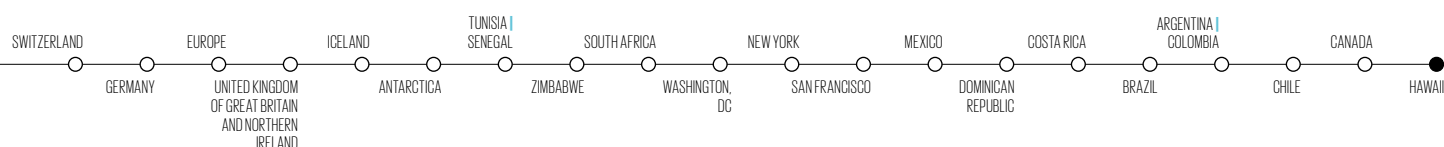
> Around 17-18 million tonnes of food is wasted each year in the urban catering sector, which is enough to feed 30 to 50 million people. <

Highlights

- China is particularly vulnerable to the FLW issue, since it is intrinsically linked to social, cultural and historical factors. However, an integrated action involving institutions, the scientific community and media succeeded in raising awareness and spreading knowledge in order to empower the civil society.
- In the Decade of Action, science, technology and innovation plays a crucial role in allowing for and accelerating the transition needed by the global food systems. But the future needs multiple wind technologies that are able to tackle all the shades of the current challenges.
- Joining forces and connecting the voices of developed and developing countries is pivotal to implement the transformation of the food systems.
- Chinese agrobiodiversity conservation is an established practice that needs to be pursued and implemented with dedication and commitment by collecting and conserving *ex-situ* more and more genetic resources; researching to make *in-situ* conservation a sustainable practice; and strengthening them through more applicable legislation, criteria and techniques.
- Innovation in the food systems should start from rethinking governance, technology, policy, international collaboration and the economy.



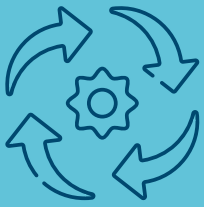
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SESSION JAPAN

10.00 hours [GMT+2]

17.00 hours [GMT+9]



CIRCULAR LIVING

Green food systems: the Japanese way to sustainability

Ferda Gelegen

Japanese innovative technologies for agrifood management

Everett Kennedy Brown

Panel discussion

Momoko Nakamura

Miyoshi Satoko

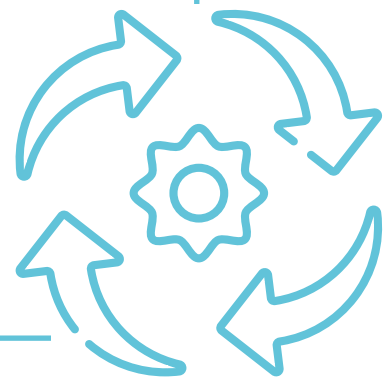
Enrico Traversa

MODERATOR | **Chris Krause** | Director, Future Food Japan



MODERATOR | **Chris Krause** | Director, Future Food Japan

Starting with an inspiring overview of Japanese innovative technologies for an inclusive and sustainable agribusiness sector, this session jumped into a comprehensive roundtable approaching food systems transformation from a holistic perspective.





Japanese innovative technologies for agrifood management

Ferda Gelegen

Deputy head,
UNIDO ITPO Tokyo

> Achieving inclusive and sustainable industrial development is crucial for poverty alleviation, and UNIDO ITPO Tokyo promotes Japanese technology to developing countries, supporting businesses in matching with the demand, negotiation and implementation. <

- Sustainable Development Goal 9, “Industry, Innovation and Infrastructure” was conceived with UNIDO in mind, since this is exactly what its work consists of. UNIDO’s three priority areas are:
- creating shared prosperity;
- advancing economic competitiveness; and
- safeguarding the planet, leveraging its closeness to industries and the private sector, which are great sources of environmental concerns.

Achieving inclusive and sustainable industrial development is crucial for poverty alleviation, and UNIDO ITPO Tokyo promotes Japanese technology to developing countries, supporting businesses in matching with the demand, negotiation and implementation.

UNIDO ITPO Tokyo has also developed the Sustainable Technology Promotion Platform (STePP), a database collecting 118 innovative technologies from 101 Japanese companies, 39 of which are related to the agrifood and business areas.

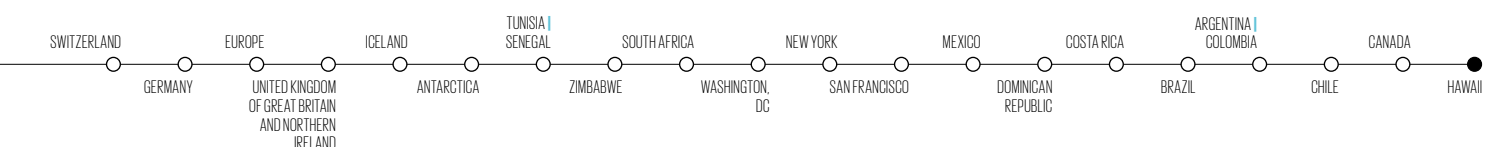
Among them, the MARS company designed a refrigeration and freezer technology based on the kuraban advanced application. It is able to maintain food freshness 3-10 times longer than regular methods. Skipping the thawing process, Kuraban is particularly beneficial since it avoids food cellular damage, resulting in:

- increased food quality;
- food waste prevention; and
- sanitation encouragement.

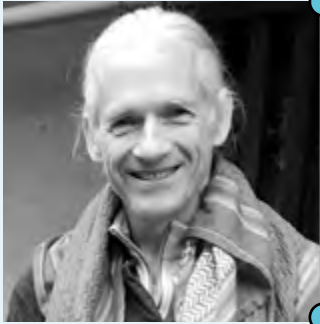
The product has already been supplied in the Republic of Korea, Morocco, New Zealand, Thailand and Japan itself.

The TROMSO company developed a waste recycling technology able to turn underutilized rice husk into fuel – which can be used for cooking. It does this via a special mill that grinds and compresses the husks, producing solid briquette fuels without adding chemicals. Acquired in China, Madagascar, Nigeria, the United Republic of Tanzania and Viet Nam (where the most people’s food intake comes from rice), this technology allows:

- waste prevention;
- sustainable fuel supply; and
- community empowerment.



PANEL DISCUSSION



Everett Kennedy Brown

Founding director, Kyoto Kaisho Foundation



Momoko Nakamura

Cultural conservationist & storyteller



Miyoshi Satoko

Vice president, IFOAM Organics Asia



Enrico Traversa

Science and Technology counsellor, Embassy of Italy, Japan

> The decrease and ageing of the farmer population (60 percent of it consists of people over 65) is threatening the sector; however, the Government and IFOAM Organics Asia are encouraging young people to get into the agricultural field, one of the most enriching and healthiest lifestyles they can embrace. <

Japanese food companies are used to outsourcing, losing the chance to take advantage of domestic resources. Sake makers, for instance, produce *amasake* (fermented rice drinks) which could have enormous potential if exported to the Western world as well as to emerging countries. Given the quality of the product – which lies in the living enzyme it contains – it could represent a healthy and nutritious solution against hunger and malnutrition.

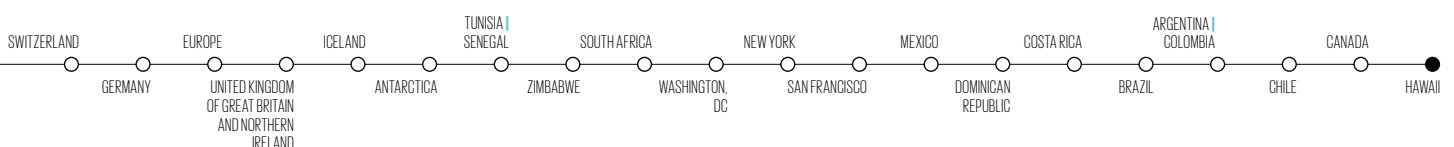
There is so much Japanese wisdom to be unveiled and exported, especially in rural areas. The father of organic farming was Japanese, Masanobu Fukuoka, and long before regenerative agriculture and agroecology became buzzwords, Japanese farmers were practising natural farming for 2 000 years.

At the same time, Japan is gifted with a special innovation-driven spirit that needs to be marketed: Japan has perfected the Chinese fermentation technique, which has been recently introduced to the West as a kind of trend, yet in developing countries can represent an important tool.

From a policy perspective, the Ministry of Agriculture, Forestry and Fisheries (MAFF) recently announced the *Strategy for a Green Food System*, including measures to achieve the ambitious goal of bringing organic farming from 0.3 percent to 25 percent of the total Japanese farmland.

The decrease and ageing of the farmer population (60 percent of it consists of people over 65) is threatening the sector; however, the Government and IFOAM Organics Asia are encouraging young people to get into the agricultural field, one of the most enriching and healthiest lifestyles they can embrace.

> Japan has perfected the Chinese fermentation technique, which has been recently introduced to the West as a kind of trend, yet in developing countries can represent an important tool. <



PANEL DISCUSSION

> Japanese ministries are developing networks to really move forward and create actual change, yet big things take time in Japan. However, once the change is declared, everyone follows. <

- Despite the pandemic, the organic market has been rising worldwide and consumers' behaviour towards quality food has been observed. With interest advancing around the SDGs, major companies are starting to consider social and environmental issues.

Regenerative agriculture's mission is to make organic products accessible to the masses and, thus, cannot mean just more sales. Sustainability should guide actions, yet it cannot be intended as an "old tool" to generate profit: Companies need to understand its real benefits.

> Sustainability should guide actions, yet it cannot be intended as an "old tool" to generate profit. Companies need to understand its real benefits. <

The Japanese Government announcement of carbon neutrality by 2050 generated a thunderstorm in a country that was used to "walking" coal and nuclear energy, while "talking" about SDGs.

Supposed to become the main energy power of Japan, nuclear energy production stopped after Fukushima, yet the country started to import skyrockets utilizing fossil fuels and creating CO₂ emissions.

However, 22 percent of the total energy is currently coming from renewables, and the government is committed to improving the Japan energy mix.

Japanese ministries are developing networks to really move forward and create actual change, yet big things take time in Japan. However, once the change is declared, everyone follows. Educating young people and raising awareness among consumers is pivotal. More than ever, the time is now to get the message out and the media should broadcast this urgency.

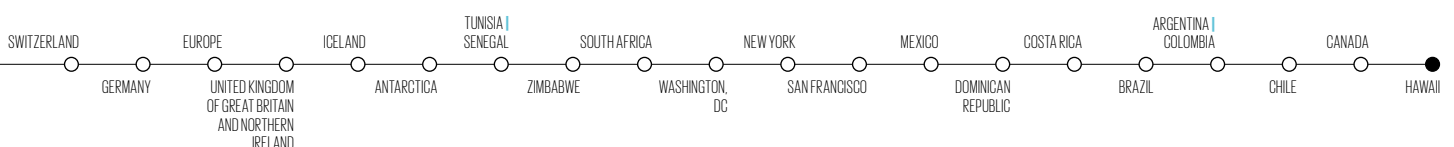
While Japan is used to top-down mechanisms to drive change, diversity is the key: People are not only consumers. We are complex, multifaceted human beings, and a systemic, holistic direction needs to be taken.

Highlights

- Private sector investment and technology transfer to emerging countries is a must to foster poverty alleviation.
- Working with agribusiness industries can encourage more balanced and sustainable food production, consumption and recycling.
- All actors and stakeholders, including producers and consumers, must listen, consider and work together to take action towards the SDGs.
- Japanese rural wisdom represents priceless know-how that can provide very real and tactical clues when properly unlocked and translated. Learning from the countryside and incorporating these tips into everyday life has a direct impact on designing a more transparent and fluid policy-making process, not just for the Japanese food system, but for our global food system.
- Japan should start exporting its richness instead of just importing: There is a lot of potential to be exploited.
- With the declaration of carbon neutrality by 2050, a new green era for Japan has begun and new networks and partnerships are being built to drive this change.



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SESSION SINGAPORE

11.00 hours [GMT+2]

17.00 hours [GMT+8]



CLIMATE SMART ECOSYSTEM

Global food tech hubs: the best practice of Singapore

Barbara Guerpillon
Lim Kok Thai
Vandana Dhau

Panel discussion

MODERATOR | **Adam Lyle** | Executive chairman, Padang & Co



MODERATOR | Adam Lyle | Executive chairman, Padang & Co

This session offered a multivaried conversation by a unique mix of experts and actors of the food system - the same mix which makes Singapore a fruitful land, where creating partnerships is necessary to overcome current bottlenecks in the food system.





Barbara Guerpillon

Global head,
Dole Ventures



Lim Kok Thai

CEO, Singapore Food Agency



Vandana Dhau

Head, Accelerator
Operations, GROW

PANEL DISCUSSION

Global food tech hubs: the best practice of Singapore

Although every day of the year should be Earth Day, celebrating it today serves as a conscious reminder of how fragile our planet is and how crucial the role of food is for the achievement of global sustainable development. Today, we have one more chance to raise awareness on the urgency of the mission and to put together governments, institutions, civil society, the private sector and corporations in order to share thoughts and keep the conversation alive.

Today is a special day to drive action and there has been a lot of action in Singapore over recent years.

Singapore is a small city-state of only 730 square kilometres. Only 1 percent of the land mass is utilised for agriculture. As such, it imports almost 90 percent of the food it consumes. Considering such a dependency on imports, the Singapore Food Agency (SFA) looked at strategies to manage food security and reduce this dependency.

The global demand for food is growing, putting pressure on an already vulnerable food production system, which is also facing the constraints dictated by climate challenges.

In a solution-oriented mindset, SFA found interesting ideas in the green food technologies, which were evolving very fast, not just at the experimental level, but at the implementation level. (e.g. indoor vertical farms using led technologies and aquaculture solutions through closed containment solutions). Starting from there, SFA, launched the "30 by 30" strategy (producing 30 percent of nutritional needs by 2030). The call comprised three target focuses:

- sustainable urban food production;
- future foods (advanced biotech-based protein production); and
- food safety science and innovation.

In Singapore, there is a unique and fruitful combination of government agencies like SFA, Enterprise Singapore and the Economic Development Board working with MNCs like Dole and the many ag and food-specific accelerator programmes for startups.

➤ In a solution-oriented mindset, SFA found interesting ideas in the green food technologies, which were evolving very fast, not just at the experimental level, but at the implementation level. <

PANEL DISCUSSION

> In Singapore, there is a unique and fruitful combination of government agencies like SFA, Enterprise Singapore and the Economic Development Board working with MNCs like Dole and the many ag and food-specific accelerator programmes for startups. <

- This makes it an attractive place to grow and build opportunities for the whole ecosystem. Open collaboration is crucial, and Singapore is willing to embrace worldwide change makers who can contribute to tackling its challenges, also representing an important launch pad to the rest of the Asian market.

Singapore Food Bowl by GROW this year received over 250 applications from almost 60 countries.

Two major trends were noted while evaluating the extremely rich and diverse cohort: Consumer-focused technologies are rising – many projects addressed SDG12, whether through the development of novel foods and ingredients or improving supply chain inefficiencies to reduce food waste and loss. Moreover, there is an increased focus on water technologies (e.g. water purification and irrigation systems, ocean-related solutions in alternative seafood and seaweed, based on carbon capture systems).

Besides R&D, a crucial part of ecosystem development lies in a regulatory framework that can guide all operations. In 2020, Singapore issued Eat Just's cell-cultured chicken, the first regulatory approval worldwide. It has been a three-year process of collaboration with different agencies and panels of experts, as well as a great work of data collection and analysis, especially for food safety concerns. Additionally, SFA provided Eat Just with a guide for the scalability of the product, thus it was not only about innovation but also food security.

A supportive and proactive government, strong representation of all major players in the agrifood ecosystem and a dynamic startup community drive co-creation, direct feedback and agility. These features are the real competitive advantage of Singapore.

Innovation comes from everywhere, whether from a big corporation or a startup: It is the capability of a business to network and create partnerships that make the difference. Dole's Sunshine For All fund is aimed at building strategic partnerships and investments in the crucial areas of access to food and waste management around the world.

The USD 2 million-investment fund will work with the entire ecosystem from startups to social enterprises, NGOs, influencers, investors and R&D networks to unlock opportunities and deliver on the Dole Promise.

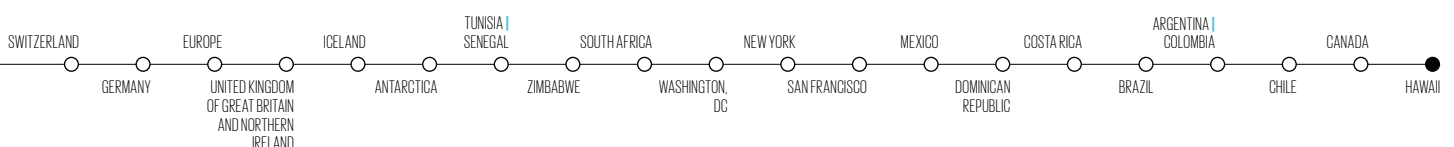
> Besides R&D, a crucial part of ecosystem development lies in a regulatory framework that can guide all operations. In 2020, Singapore issued Eat Just's cell-cultured chicken, the first regulatory approval worldwide. <

Highlights

- Over the years, technology has revolutionized our world and our daily lives. The food and agricultural tech industry is moving quickly, as the world needs to rethink its entire food system, from farm to plate.
- It is the combination of being an attractive environment for partnership plus the presence of concrete regulation to activate change that makes Singapore a great place to start and scale a company.
- Making Singapore an agrifood technology hub requires a systemic approach supported by incentives; infrastructure; and an ecosystem comprising corporations, startups, accelerators and research operating within a framework of regulatory clarity.
- Singapore is the land of opportunities. Several calls and funds for supporting the national agenda of strengthening the country's food security have been launched. This is in tandem with the development of productive, climate-resilient, innovative and sustainable technologies for agriculture and aquaculture, plant-based meat alternatives as well as new biotech-based foods and ingredients.



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SESSION

Earth

13.00 hours [GMT+2]



FOOD IDENTITY

Connecting farmers from around the globe

- Carmelo Troccoli • How to strengthen the cooperation between farmers' markets around the world
- Ben Feldman • Reshaping cities through farmers' markets

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



MODERATOR | Sara Roversi | Founder and president, FFI

This session explored the importance of farmers' markets in connecting cities' social fabric and bringing life to urban areas, while acting as innovation and education hubs for learning sustainable practices and products, enhancing local biodiversity, and sharing knowledge and stories about culinary practices.





Carmelo Troccoli

Director,
Campagna Amica

> I want to trust the farmer who brings me his oranges or the one who gives me his chickens: With our markets distributed throughout the territory, we promote an opportunity for people to meet and choose for themselves. <

How to strengthen the cooperation between farmers' markets around the world

It is increasingly important to realise how many values are expressed through activity linked land and open spaces, healthiness of the environment and the food we eat, and farmers' markets to celebrate Earth Day daily.

Farmers' markets are first of all communities. Campagna Amica's recognizes that "good things, good people" highlight the close, essential and authentic relationship between citizens and farmers, and that this is developed around genuine and nutritious food.

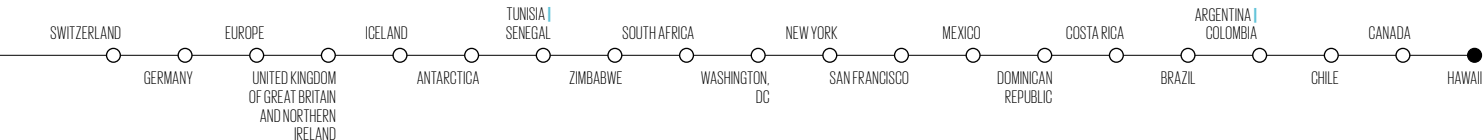
What lies at the heart of the community and its cohesion is the concept of trust. Campagna Amica is a direct descendant of Coldiretti, which was also born out of the need to recover the relationship of trust between citizens and food systems with a policy of transparency after the breaking of the pact with consumers following major crises such as those linked to methanol and mad cow disease, among others.

Authenticity and truth are needed at a time when globalisation is making everything too big and too wide, and we are living in a world where social networks and virtuality reign supreme.

The less you know about things, the more you lose trust. That is why I want to trust the farmer who brings me his oranges or the one who gives me his chickens: With our markets distributed throughout the territory, we promote an opportunity for people to meet and choose for themselves.

By establishing farmers' markets within the beating heart of urban areas, Campagna Amica made farmers an active part of the social urban fabric, which in turn can enjoy their quality products and sincere synergies. Beyond places for shopping, farmers' markets are educational, innovative community hubs.

Although the pandemic has been affecting the habits of all of us, the agricultural sector has been able to react and there has been a great deal of organization involving delivery and IT platforms. After all, the countryside, used to living with uncertainty, is capable of a strong spirit of innovation.





Ben Feldman

Director,
Farmers Market
Coalition USA

Reshaping cities through farmers' markets

- Farmers Market Coalition (FMC) draws a direct, powerful connection between farmers and citizens, representing one of the few spaces of interaction between urban and rural environments in the United States of America. The user experience offered by farmers' markets influences both consumer behaviour and farmers' growing practices. Moreover, it directly and indirectly influences the neighborhoods and cities where they are located, spreading the word about authentic values and quality products.

The role of farmers' markets as community hubs has really been critical during the pandemic, when we all experienced isolation. And there is an invisible actor, the farmers' market operator, who demonstrated their indispensability.

Facilitator of the relationship between farmer and consumer, the operator suffered the most during the pandemic, being expected to do more with less resources. However, very exciting opportunities arose as well: new customers are enjoying shorter supply chains and quality products, feeding the customer base of the markets.

Beyond tradition, farmers' markets can also be considered innovation labs where new products and solutions are implemented, taking advantage of the direct link with consumers (who provide immediate feedback) and the connection with other farmers (learning their know-how and best practices).

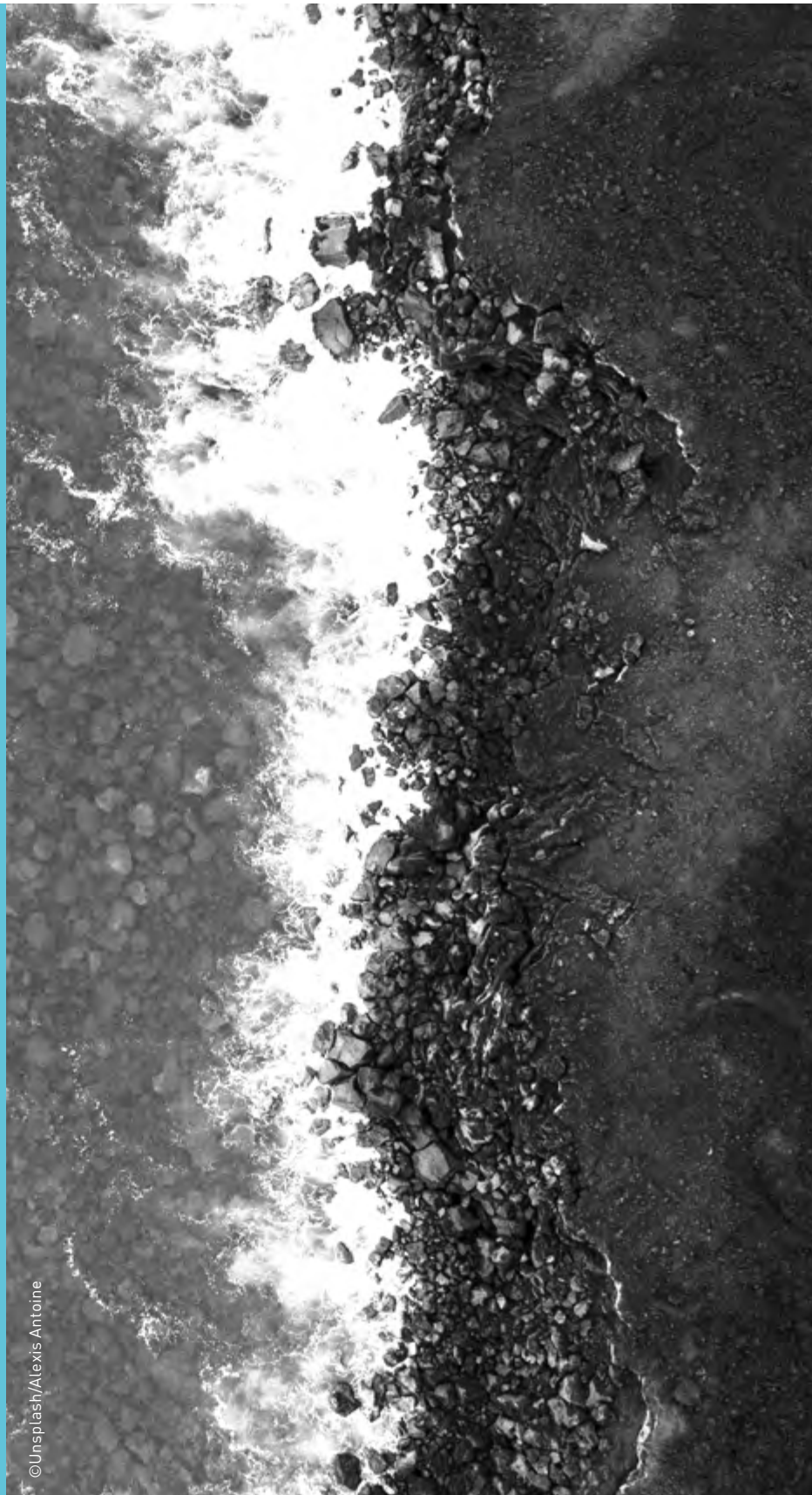
During the pandemic, FMC registered that 26 percent of the markets designed a pre-ordering online system; about 25 percent began to operate curbside pickup or drive-through models; and 17 percent created pre-packaged market boxes. Again, farmers' market operators managed the process and the costs of these solutions. Moreover, federal nutrition assistance programmes (like the Supplemental Nutrition Assistance Program and Women, Infants, and Children programme), always a big part of the farmers' market work in the United States of America, have dramatically increased during the pandemic to support low-income shoppers.

Markets represent an opportunity to be born again together: sharing costs, experiences, efforts and satisfactions.

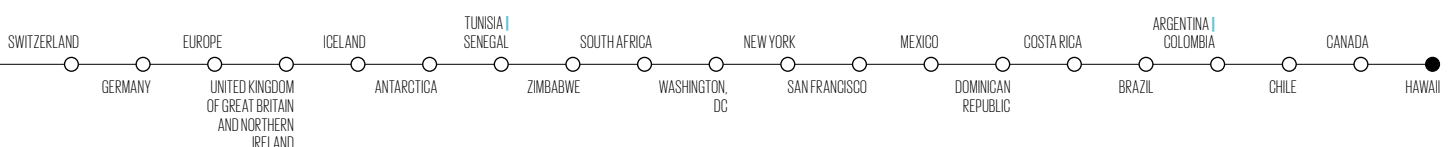
> Beyond tradition, farmers' markets can also be considered innovation labs where new products and solutions are implemented, taking advantage of the direct link with consumers (who provide immediate feedback) and the connection with other farmers (learning their know-how and best practices). <

Highlights

- Farmers' markets are communities underpinned by the concept of trust.
- The short supply chain of farmers' markets encourages innovations and creates opportunities.
- By establishing farmers' markets within the beating heart of urban areas, farmers have become an active part of the social urban fabric, which in turn can enjoy their quality products and sincere synergies.
- Farmers' markets may represent educational, innovative community hubs guided by the beauty of sharing and connecting.



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SESSION SAUDI ARABIA AND UNITED ARAB EMIRATES

13.40 hours [GMT+2]

15.40 hours [GMT+4 UAE]



CLIMATE SMART ECOSYSTEM

Middle East: stories and best practices of food sustainability

- Osama Faqeeha • Saudi Arabia actions and approaches to align with the 2030 Agenda
- Mariam Almheiri • Sustainability as the cornerstone of United Arab Emirates development
- Tarifa Al Zaabi • Supporting sustainable agrifood production and innovation in the United Arab Emirates

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



MODERATOR | Sara Roversi | Founder and president, FFI

This session shows the importance that Middle East countries are giving to environmental protection and food security.

National programmes are promoting sustainability and innovation to improve our actual food systems. The role of scientific research as an essential ally of public policy is particularly highlighted.





Saudi Arabia actions and approaches to align with the 2030 Agenda

Osama Faqeeha

Deputy Minister for Environment, Water, and Agriculture, Saudi Arabia

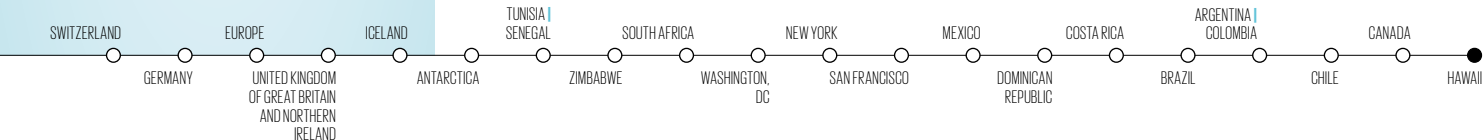
Earth Day is a star reminder, every year, of the importance of conserving our Planet Earth, and the responsibility of every individual who lives on this planet to protect it. We can do this by being mindful of environmental protection in our daily actions, by using less natural resources and generating less waste. The protection of the environment is an important necessity for the prosperity and well-being of this generation and future generations.

Saudi Arabia has assigned a high priority for environmental protection through its vision 2030, issuing a national environmental strategy that contains 65 initiatives that address various environmental aspects. This includes enhancing environmental compliance, protecting marine environments, promoting waste management and many other aspects, with an investment of more than SAR 60 billion in the programmes.

Saudi Arabia has also established five national environmental centres and a national environmental fund to support all aspects of protection of nature. Saudi Arabia has recently launched an initiative to plant 10 billion trees in the country over the coming decades, and another initiative for the Middle East, called the Middle East Green Initiative, to plant 50 billion trees in the region, in collaboration with regional and international partners.

Last year, Saudi Arabia assumed the presidency of G20 countries, and in collaboration with our G20 partners, it successfully launched two major environmental initiatives, mainly the global initiative to minimize land degradation and enhance protection of terrestrial habitats, which will have a huge impact on food security, biodiversity protection and conserving the environment. The second initiative is to enhance protection and research associated with coral reefs, a major contribution to the protection of the marine environment.

> Saudi Arabia has assigned a high priority for environmental protection through its vision 2030, issuing a national environmental strategy that contains 65 initiatives that address various environmental aspects. <





Sustainability as the cornerstone of United Arab Emirates development

Mariam Almheiri

Minister of State for
Food and Water Security,
United Arab Emirates

> Over the years, the United Arab Emirates was able to achieve its growing food requirements through forging firm relations with other nations, generating global chains and receiving 90 percent of the food the country needed. <

In 2021, the United Arab Emirates celebrated its golden jubilee. When the nation was founded in 1971, there were around 300 000 people living in the country, whilst today the population is almost 10 million people. In the space of half a century, the United Arab Emirates has undergone one of the most rapid developments of any country in the world, making clear that food solutions need sustainable bases if this progress is intended to continue.

Over the years, the United Arab Emirates was able to achieve its growing food requirements through forging firm relations with other nations, generating global chains and receiving 90 percent of the food the country needed. But as the COVID-19 pandemic has shown, global chains are susceptible to sudden and unexpected events, generating crises and halting imports, food included. Fortunately, the United Arab Emirates was able to keep its stocks at this critical time, thanks in part to the increasing role that the innovative food production methods are playing.

These methods have sustainability at their core, and increasing sustainable food production using technology is a major issue of the United Arab Emirates national food security strategy. This aims to make the United Arab Emirates a global hub for innovation-driven food security by 2051. This strategy has enabled the creation of a vibrant agricultural sub sector, generating a landscape with growing numbers of indoor greenhouses; a vast network of vertical farms that produce fresh fruits and vegetables; and a thriving aquaculture sector that is producing diverse fish species in the heart of the desert.

In September 2021, the world met to discuss the importance of increasing efforts and transitioning to more sustainable food systems at the UN Food Systems Summit. In October, the Expo 2020 Dubai played a major role in charting a new course for humanity in a post-pandemic world, with attacking climate change a main focus. Food sustainability will continue to be a central theme, with the world's existing inefficient food systems being a major contributor to global warming.



Supporting sustainable agrifood production and innovation in the United Arab Emirates

Tarifa Al Zaabi
Deputy Director-General
at International Center
for Biosaline Agriculture,
United Arab Emirates

Since its creation in 1999, the International Center for Biosaline Agriculture (ICBA) has implemented research-for-development projects in nearly 40 countries, including the United Arab Emirates, to improve food, nutrition, water and income security. For the past two decades, ICBA has closely worked with government organizations, farmers and other stakeholders to aid in efforts on sustainable agrifood production and innovation in the United Arab Emirates.

In line with the government’s goals to ensure food and water security, the centre developed and tested different solutions suited to the local environments, ranging from alternative food and forage crops to approaches to saving fresh water to technologies for using alternative water sources in agriculture.

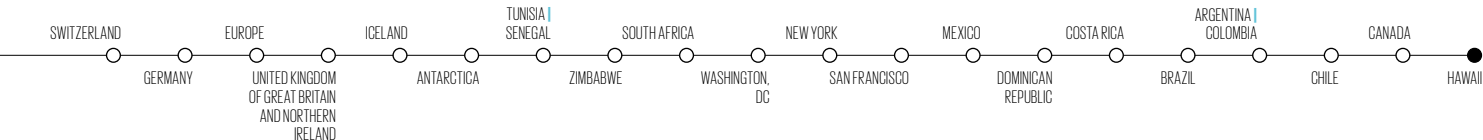
Over the years, ICBA has supported decision makers by providing evidence-based recommendations and formulating strategies for sustainable agricultural development and natural resource management, including the United Arab Emirates’s agricultural and water conservation strategies.

As freshwater resources are scarce in the country, ICBA has studied use of treated wastewater, saline water and seawater for agriculture and food production. For example, our scientists have developed inland and coastal modular farms which are used for growing vegetables, fish, and halophytic or salt-loving plants.

Given the need for innovative technologies to produce food, ICBA has also conducted many studies on controlled-environment agriculture systems. As a result, it created a low-cost net-house technology which significantly cuts down water (35 percent) and energy (94 percent) consumption compared to a common model of greenhouses with a fan-pad cooling system.

As there is a considerable focus on developing individual and institutional capacities in sustainable agrifood production and innovation in the United Arab Emirates, ICBA research work is accompanied by knowledge transfer. There are training courses for farmers, agripreneurs and specialists, as well as internships, fellowships and other opportunities for current students and recent graduates to do research and gain practical experience.

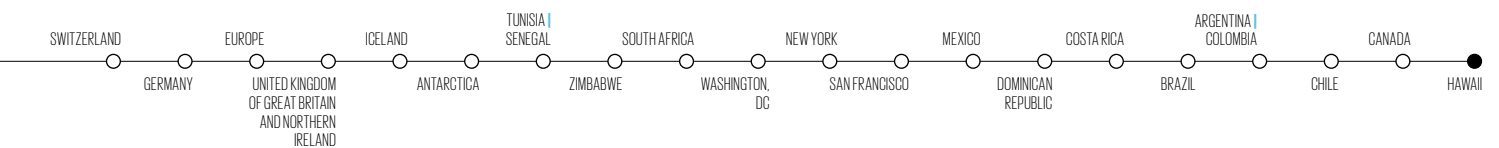
> For the past two decades, ICBA has closely worked with government organizations, farmers and other stakeholders to aid in efforts on sustainable agrifood production and innovation in the United Arab Emirates. <



| Highlights |

- The protection of the environment is an important necessity for the prosperity and well-being of this generation and future generations.
- Saudi Arabia has assigned high priority for environmental protection through its vision 2030, issuing a national environmental strategy that contains 65 initiatives that address various environmental aspects.
- There is an increasing role that innovative food production methods are playing – with sustainability at their core, and increasing sustainable food production using technology is a major issue of the United Arab Emirates national food security strategy.
- As there is a considerable focus on developing individual and institutional capacities in sustainable agrifood production and innovation in the United Arab Emirates, ICBA research work is accompanied by knowledge transfer.

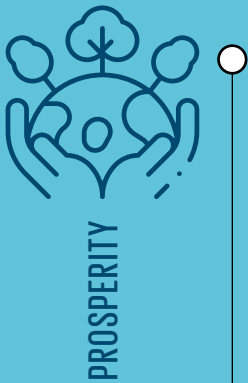
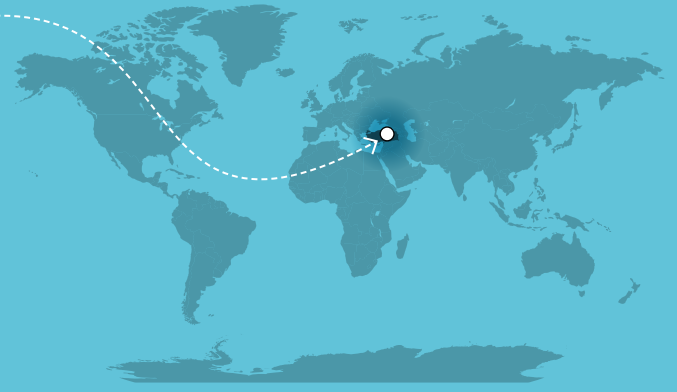




SESSION **TURKEY**

11.45 hours [GMT+2]

12.45 hours [GMT+3]



Purpose driven development: the role of sustainability in food systems

Semi Hakim
Dilek Bil

Panel discussion

MODERATOR | **Semi Hakim** | Co-founder of K k Projekt, chef



MODERATOR | Semi Hakim | Co-founder of K k Projekt, chef

During this session, particularly highlighted was the importance of each player in the food systems as potential drivers of change.

Active participation and constant collaboration for achieving fairer and more sustainable food systems are key assets that must be promoted by every actor.



PANEL DISCUSSION

Purpose driven development: the role of sustainability in food systems



Semi Hakim
Co-founder & CEO
of K k Projekt

Each of us, both as individuals or part of an organization, can impact future food systems and can have a role for a better and more sustainable future. Therefore, action should be taken with a strong passion for change. Startups, investors, corporations, NGOs and policymakers all have a role and impact on a sustainable future.

Each organization has a different reach and potential to conduct the necessary actions for future food systems; therefore, the vital key for change is collaboration. Understanding organizations' roles, developing platforms, and empowering the initiatives, especially for entrepreneurs, is crucial for transforming more sustainable food futures.

Thus, the collective effort between startups, investors, corporates, NGOs and policymakers is vital for the global mission for food security and food safety in this age of change that the world is going through.

> Startups, investors, corporations, NGOs and policymakers all have a role and impact on a sustainable future. <



Dilek Bil
Founder,
Purpose-Sustainable Ideas

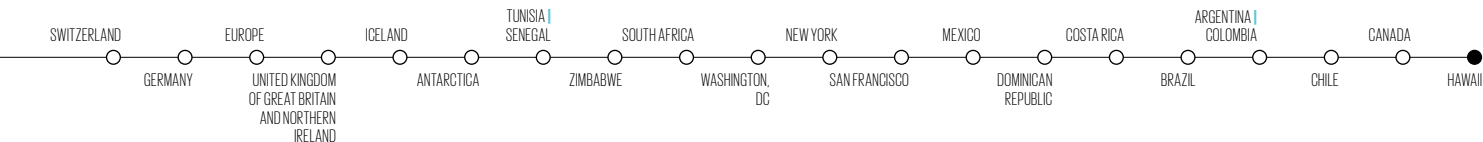
There is a need to eliminate emissions to achieve sustainability. Multinational companies are key elements in this process, and some started working on these issues partly due to a significant transition in consuming trends.

At the same time, there is a clear path of investors betting for more sustainable ways of production and policy makers are raising the pressure. Companies should identify carbon prints, find strategies to reduce them and implement the necessary changes.

Startups and entrepreneurs are focusing their work on social impact and sustainable scalability being the core of these new dynamic companies.

Change comes from the dream of change and of helping others and the world. Corporations and startup relations for social impact and climate change should have a big correlation and

> Change comes from the dream of change and of helping others and the world. <



PANEL DISCUSSION

> There is a need to eliminate emissions to achieve sustainability. Multinational companies are key elements in this process. <

- work hand in hand, even creating little startups inside their organizations. At the same time, more legal frameworks are needed to enable NGOs to implement their essential action, and they need more access to finance sources so they can grow.

Policy makers should collaborate actively on this topic, because NGOs are very important players in promoting cultural change in communities.

Working collectively to take action for the food security of the future, the need for building a transparent food value chain and understanding where our food is coming from is one of the vital questions of our time.

In our days, with easy access to the necessary tools and information, and the increasing scarcity of resources, there is a need and an ethical mandate to rebuild a more efficient food value chain. Digitalization and technological integration for sustainable food production are the critical assets the world has to use and advance in this change.

Traceability is the most important issue in gastronomy and the food industry: how the production was handled, what industrial process it has, the distribution chain. It is necessary to show transparency in our supply chains, creating more awareness in consumers and fairness for all the participants in the process. As a result, if there is any kind of unfairness or non-sustainable ways of production in a chain, there can be pressure to achieve positive changes.

To achieve the more sustainable future the world demands, empowering the initiative takers, game-changers and startups is crucial in the building of future food ecosystems, where every player has a key role to promote change from inside and impact the future. As the saying goes, "Be the change you want to see in the world."

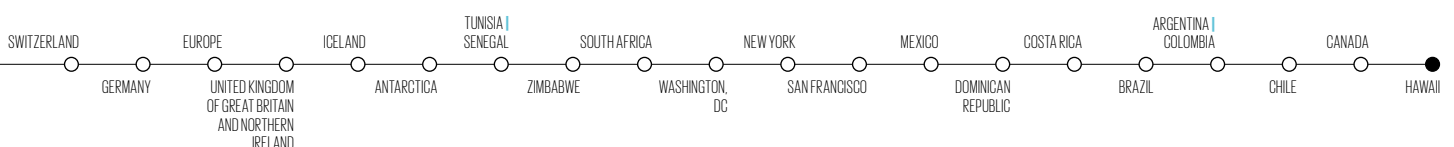
> Traceability is the most important issue in gastronomy and the food industry. <

| Highlights |

- Each of us, both as individuals or part of an organization, can impact future food systems and can have a role for a better and more sustainable future. Therefore, action should be taken with a strong passion for change.
- Working collectively to take action for the food security of the future, the need for building a transparent food value chain and understanding where our food is coming from is one of the vital questions of our time.
- It is necessary to show transparency in our supply chains, creating more awareness in consumers and fairness for all participants in the process. As a result, if there is any kind of unfairness or non-sustainable ways of production in a chain, there can be pressure to achieve positive changes.



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SESSION MEDITERRANEAN

15.30 hours [GMT+2]



FOOD DIPLOMACY

Mediterranean diet: essential heritage for the future of humanity

- Stefano Patuanelli • Mediterranean diet and integral ecology
- Grammenos Mastrojeni • Climate, hunger, migrations: turning three problems into a solution
- Angelo Riccaboni • Food innovation as a key driver for sustainability in the MED food systems
- Diana Battaglia • The future of food systems in the hand of small and medium-sized enterprises
- Benedetto Zacchioli • Mediterranean diversity: from antropos to bio centricity
- Elisabetta Moro • Mediterranean diet: where being and well-being coincide
- Stefano Pisani • Pollica: the convium of frugality
- Vicky Iglezou • Mediterranean diet: a long journey toward intangible cultural heritage and sustainability
- Rui Martinho • Mediterranean diet as the healthy paradigm to tackle the future

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



MODERATOR | Sara Roversi | Founder and president, FFI

The session dedicated to the Mediterranean reminded us that the Mediterranean diet does not just represent a healthy lifestyle, diving deep into why it is a concrete model of integral ecology that enhances people, planet and prosperity.





Mediterranean diet and integral ecology

Stefano Patuanelli

Minister,
Agricultural, Food
and Forestry Policies,
Italy

- The Mediterranean diet, today endangered by harmful changes in the eating habits of consumers, is one of the healthiest dietary models. Its health benefits has been recognized by the scientific community since the Seven Countries Study, published in the United States of America in the 1970s.

Over time, a direct connection between nutrition, human health and environmental sustainability for the health of the planet, now partially compromised, has been widely recognized within a One Health paradigm. And this is precisely the integral ecological approach that we are pursuing.

The Mediterranean diet corresponds to a healthy lifestyle that reconciles regular physical activity, adequate rest, conviviality and culinary activity – but also biodiversity and seasonality, traditional local products and eco-sustainable production.

It is important to promote actions and training activities aimed at increasing awareness of the principles of the Mediterranean diet, especially among young people, in order to ensure that it remains a solid heritage of future generations and contributes to a sustainable socio-economic development of local communities.

The Mediterranean diet includes a sustainable management of resources through an eco-compatible agriculture and it is linked to territorial characterization and to local cultural heritage. For these reasons, we oppose the introduction in the European Union of the well-known algorithm of front-of-pack labelling of food products called Nutriscore. It does not inform but rather conditions the consumer in food choices through a color-number scheme that promotes overprocessed products.

These products are manufactured by consuming more energy and water and are passed off as healthy to the detriment of the truly genuine products of the Mediterranean diet. I wish the FFI and the “Angelo Vassallo” Mediterranean Diet Study Center in Pollica the best of luck in the many

educational initiatives planned to support the economy, research and innovation in the food sector and the heritage of the Mediterranean diet as a healthy and sustainable lifestyle – not only for Mediterranean countries like Italy, but also for the rest of the world.

> The Mediterranean diet corresponds to a healthy lifestyle that reconciles regular physical activity, adequate rest, conviviality and culinary activity – but also biodiversity and seasonality, traditional local products and eco-sustainable production. <



Grammenos Mastrojeni

Deputy
Secretary-General,
Secretariat of the Union
for the Mediterranean

Climate, hunger, migrations: turning three problems into a solution

- The Mediterranean Basin is one of the most sensitive regions to climate change, warming 20 percent faster than the global average; 90 percent of commercial fish stocks are already overfished, with the average maximum body weight of fish expected to shrink by up to half by 2050; 250 million people in the area are expected to be water-poor within 20 years; and sea level rises may exceed 1 metre by 2100, impacting one-third of the region's population.

Blessed with a special climate, the Mediterranean area hosted the agricultural revolution – when mankind went from being a passive user of the ecosystem to its manager. Nowadays, the Azores anticyclone has been replaced by African anticyclones and Europe is starting to share climate patterns with the southern shore of the Mediterranean. Since the climate is not just a matter of rain and wind, it means that we are starting to have a new range of interests with North African countries. This is altering the balances on which our area has always been based, with both disruptive and unifying forces.

We need to pool our resources, especially since our region is characterised by a gigantic asymmetry, which is evident if we look at the volume of international trade: Whereas 90 percent of trade takes place internally to the north, only 0.9 percent happens to the south, with 9 percent of the international trade volume occurring between northern and southern countries. There is inequality, yet the misfortune of one destabilises all. We can only reverse the situation by cooperating in a two-way manner, not just via the more-advanced north-provided technology, but also by exchanging knowledge from south to north.

We are asked to perceive an economy of sharing rather than competition, based on the enhancement of each territory in order to rebalance the asymmetries at the root of the never-ending conflicts that cause migration and poverty. In front of us are opportunities to catch and integratively collaborate around the extreme richness of the Mediterranean land.

> Our region is characterised by inequality. We are asked to perceive an economy of sharing rather than competition, based on the enhancement of each territory in order to rebalance the asymmetries at the root of the never-ending conflicts that cause migration and poverty. <



Angelo Riccaboni

Chair of the Board,
PRIMA Foundation

Food innovation as a key driver for sustainability in the MED food systems

Partnership, exemplified by SDG17, acquires particular relevance in the agrifood sector, at the heart of the Mediterranean society, economy and environment.

The Partnership for Research and Innovation in the Mediterranean Area (PRIMA) Foundation was born out of the desire to bring together the energies and resources of the Mediterranean countries, and it currently accounts for 19 participating state countries, eight of which are non-EU, with a common research and innovation strategy.

Characterized by a strong strategic dimension, the principle of equal footing among participating states and a distinctive geographical focus on the Mediterranean region, the programme has funded 120 projects with a total budget of EUR 164.5 million.

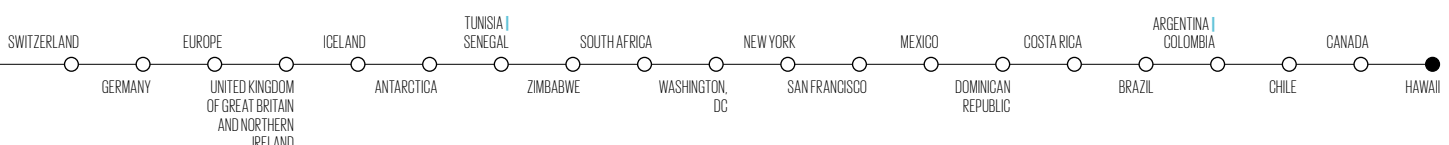
In addition to the three main thematic areas (efficient management of water resources, sustainable farming systems and agrofood value chain), a nexus topic has been included, thus valorising those proposals and ideas able to establish connections between the water-farming-food areas. It is, in fact, evident that many of the challenges we are facing are better addressed by adopting an integrated approach among themes.

Recently, a peculiar call on the Mediterranean diet as a sustainable lever linking food production to consumption has been launched, and a platform to connect all the research policies, actors and outcomes is being developed.

> PRIMA Foundation is trying to transfer its research activities to local business: When it comes to innovation, ensuring that the solutions become real and accessible is the main challenge. The uniqueness of the Italian agrifood system model should be exported worldwide. <

Moreover, together with Future Food Institute, PRIMA Foundation is trying to transfer its research activities to local business: when it comes to innovation, ensuring that the solutions become real and accessible is the main challenge.

The uniqueness of the Italian agrifood system model – intrinsically characterised by closeness to the territory, attention to biodiversity and direct links among producers, processors, large-scale distribution and consumers – should not be underestimated and indeed exported worldwide.





Diana Battaggia

Director,
UNIDO ITPO Italy

The future of food systems between closeness and sustainability

- The United Nations Industrial Development Organization (UNIDO) has been operating in Italy since 1987 under an agreement signed with the Italian Government and focused on sectors where Italian companies excel, starting from the agrifood sector.

UNIDO plays the role of neutral intermediary in the consolidation of small and medium-sized enterprises in developing and emerging countries, relying on sustainable technologies and best practices that integrate the environmental issue with the necessary social and economic dimensions.

Within this framework, the Mediterranean diet represents a healthy lifestyle in a world that every year is challenged by an increase in overweight and malnutrition, and at the same time, it represents a model able to improve food production by protecting biodiversity, respecting seasonality, and enhancing small-scale and local business.

Similarly to several developing countries, Italy's productive fabric is grounded in small and medium-sized enterprises that facilitate the enhancement of inclusive and sustainable partnerships.

The pandemic has demonstrated the necessity to rethink current development models, and consequently the food supply chain, recognising the added value of the Mediterranean diet for the achievement of the Sustainable Development Goals.

Over the last few years, UNIDO has focused on the nexus between innovation and agribusiness in developing countries, identifying thousands of solutions worldwide. These are able not only to tackle the challenges of the present yet to pave the way for interactions

among different sectors related to the valorisation of cultural, agricultural, touristic and natural heritage, finally establishing important synergies that enable the achievement of the 2030 Agenda.

> Similarly to several developing countries, Italy's productive fabric is grounded in small and medium-sized enterprises that facilitate the enhancement of inclusive and sustainable partnerships. The pandemic has demonstrated the added value of the Mediterranean diet for the achievement of the Sustainable Development Goals. <



Benedetto Zacchioli

President, ICCAR

Mediterranean diversity: from *antropos* to bio centricity

- The International Coalition of Inclusive and Sustainable Cities (ICCAR) launched by UNESCO in 2004 aims to establish a network of cities interested in sharing experiences in order to improve their policies to fight racism, discrimination, xenophobia and exclusion. It accounts for around 500 cities worldwide and it is strictly linked to the SDG 11.

While international conventions and recommendations elaborated at the upstream level provide general guidance, involving actors on the ground is pivotal to make sure that policies answer to concrete problems. That is why UNESCO recognized cities as being privileged spaces to link upstream and downstream actions.

The European Coalition of Cities Against Racism (ECCAR), plays a key role in facing social issues related to the European continent, ensuring that all citizens can enjoy a safe, inclusive and fair urban environment free from all forms of discrimination.

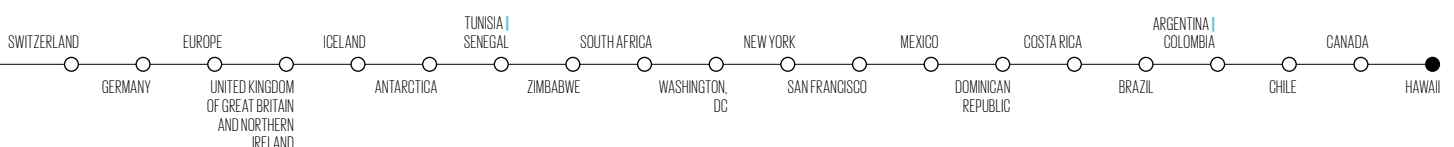
Czech-French photographer Josef Koudelka's recent exhibition of over 100 spectacular images documented his 30-year journey in search of the roots of our history at the most-important Mediterranean archaeological sites. Koudelka's pictures show that our heritage is made up of:

- **theatres** – places of culture;
- **temples** – places for the spirit;
- **squares** – places of socialization; and
- **all encompassing earth** – the Mediterranean soil, on which everything stands.

> The Mediterranean is a basin able to hold together different aspects of the same ancient culture, which have been mixed over time yet still maintain their own peculiarities. Taking care of the Mediterranean soil and food involves taking care of people and their rights: Good food habits and good food value chains come when people can access them equally. <

The Mediterranean is a basin able to hold together different aspects of the same ancient culture, which have been mixed over time yet still maintain their own peculiarities. This is not only the land where civil rights were invented, it is also the soil on which they were acted out. Taking care of the Mediterranean soil and food involves taking care of people and their rights: good food habits and good food value chains come when people can access them equally.

Our actions need to be intersectional in order not to lose focus. Only by strengthening the conversation on food, ecology and rights will we be able to really move from the Anthropocene to the biocene: The bios must be the centre since *antropos* is just one of its manifestations.





Elisabetta Moro

Co-director,
MedEatResearch;
professor, Suor Orsola
Benincasa University

Mediterranean diet: where being and well-being coincide

> Ancel and Margaret Keys become aware of the fact that nutrition is never just biology, but it is always a cultural act, and that this cultural heritage has a series of rules which have been entrenched over time, validating the empirical experience, making it a philosophy of life and a recipe for health. <

In the Mediterranean diet, we have a very important “password” that opens the door of the future: tradition. The gastronomic laboratory of history brings together in our present the legacy of the past and the expectations of the future.

At the table, tradition certainly does not translate to stillness or immobility, but rather it allows for a continuous flow of ideas, transformations, influences and values that support each other.

In the case of the Mediterranean area, historical and cultural stratifications have produced a common matrix we know as the Mediterranean diet with all its related symbols: cereals, olive oil, wine, fruits, vegetables, pulses, cheese, fish, meat and many other things.

These are fundamental elements of a nutritional model that has been exemplified by the food pyramid since the 90s, a direct result of the studies of Ancel and Margaret Keys, the two most important nutrition scientists of the twentieth century.

They spent 35 years of their life in Pollica, studying the Mediterranean lifestyle. They become aware of the fact that nutrition is never just biology, but it is always a cultural act, and that this cultural heritage has a series of rules which have been entrenched over time, validating the empirical experience, making it a philosophy of life and a recipe for health.

In tradition, we find a way to enhance the seasonality of agricultural products through a wide repertoire of recipes that make the table always a new and varied place, respectful of the necessary biodiversity.

Last but not least, the Mediterranean culture has internalized the Hippocratic health lesson: “Make food be your medicine, and medicine be your food.”

Today, the global recovery and sustainable development of territories can be achieved starting by recognizing the Mediterranean diet as an international entity.

This healthy, convivial, ecological, virtuous and supportive lifestyle can be an inspiration to many good practices of the future. The Keys said that the Mediterranean diet is “nature’s stroke of luck.” Thus, it is luck that must be shared to create a more cohesive planet.



Pollica: the convium of frugality

Stefano Pisani

Mayor of Pollica,
Italy

- Pollica, like the whole Cilento area, is a welcoming place that has made Mediterranean conviviality its lifestyle. Arguing in front of a table of Mediterranean products is quite impossible: Sharing meals and moments represents one of the essential elements of the Mediterranean diet.
-

Pollica needs to be (re)discovered through an integral approach, able to gather all the intellectual resources from different disciplines and areas of study in order to design a better future.

A better world is the only possible world, and it needs to be realized by looking ahead, yet always remembering and respecting the stratification of knowledge and history of this ancient land, the cradle of the Mediterranean.

Pollica centenarians would find it hard to understand how their lifestyle made of frugality, sacrifice and passion has become a means of survival for the future of people and the planet.

Giuseppe is 96 years old, and he tells every journalist asking for his secret of longevity that he does nothing exceptional: He just tends his vegetable garden while enjoying his marvellous land of sun, sea and wind.

> A better world is the only possible world, and it needs to be realized by looking ahead, yet always remembering and respecting the stratification of knowledge and history of this ancient land, the cradle of the Mediterranean. <



Vicky Iglezou

Director,
Maniatakeion Foundation

Mediterranean diet: a long journey toward intangible cultural heritage and sustainability

> According to French historian Fernand Braudel, natural constraints determine human behaviour and the Mediterranean is "a thousand things at once. Not a landscape, but countless landscapes. Not a sea, but a succession of small seas. Not one civilization, but a series of civilizations piled one on top of the other." <

- The Maniatakeion Foundation is a private, non-profit, public service institution based in Athens with the purpose of:
- ➔ increasing public awareness and appreciation of the historical and cultural presence of the Messinian town-fortress of Koroni in Greek history; and
- ➔ supporting the promotion and internationalization of the comparative advantages of the Peloponnese region, through three pillars of actions: cultural, social and economic development.

According to French historian Fernand Braudel, natural constraints determine human behaviour and the Mediterranean is "a thousand things at once. Not a landscape, but countless landscapes. Not a sea, but a succession of small seas. Not one civilization, but a series of civilizations piled one on top of the other."

Located on the line along which NorthWest meets SouthEast, over time the Mediterranean basin has been a place of interaction.

The Mediterranean diet reflects this rich influence as a set of skills, knowledge, practices and traditions ranging from the landscape to the table. However, it encompasses more than just food: It is a cultural, complex system rooted in respect for the territory and biodiversity, that moreover ensures the conservation and development of traditional activities and crafts, in which women play a vital role in the transmission of expertise and the safeguarding of techniques. The Mediterranean diet is sustainable, as it:

- ➔ has low environmental impact;
- ➔ contributes to food and nutrition security; and
- ➔ guarantees a healthy lifestyle for present and future generations.

In 2010, Greece, Italy, Morocco and Spain supported the inclusion of the Mediterranean diet in the Representative List of the Intangible Cultural Heritage of Humanity, followed by Portugal, Cyprus and Croatia in 2013. In particular, Koroni, with its stunning natural surroundings, endless history and authentic traditions, was honoured by UNESCO as the Emblematic Community of Greece.



INSTITUTIONAL CONTRIBUTIONS



Mediterranean diet as the healthy paradigm to tackle the future

Rui Martinho

Secretary of State,
Agriculture and Rural
Development, Portugal

The Mediterranean diet is more than a food pattern: It is a cultural tradition, a link between our people and the land they farm; it is a treasure and an institution; one of the most nutritious, healthy and sustainable diets in the world. It is linked to increased longevity, improved quality of life and the reduction of chronic disease.

Today, our citizens are more conscious of their role as consumers in promoting their health and we are trying to help them fight not only obesity but all the other diseases linked to poor diets. This is why for the next 10 years we have set ourselves the goal of increasing our population’s adherence to the Mediterranean diet by 20 percent.

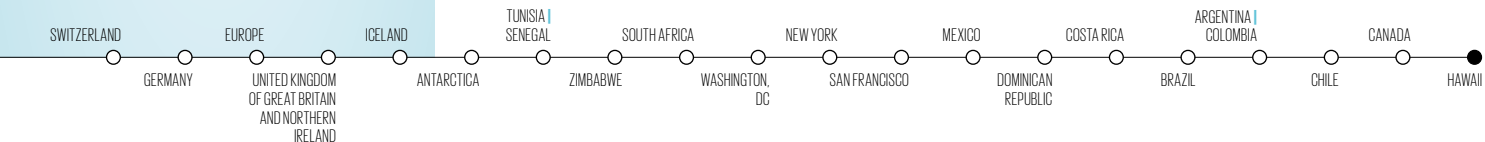
We must reverse the tendency of obesity and overweight in all of the European Union, and the Mediterranean diet is a powerful ally in the transition to an increased consumption of vegetables, fruits and non-processed foods. We want to invest more in preventative health of our citizens as opposed to a curative health system.

To achieve this goal, we need the agrifood sector to assume a more active role in ensuring products that guarantee a healthy and more conscious diet. For our part, we want to promote short circuits where citizens can have more access to local markets and food baskets, guaranteeing fresh and seasonal products. We want to invest in family and small agriculture essential to ensuring endogenous and non-processed foods, and educate our children through the school system on the benefits of a healthy diet.

Surely, it was an act of elementary justice when in 2013 the Mediterranean diet was included in UNESCO’s list of Intangible Cultural Heritage of Humanity for the many benefits it brings.

Portugal and the Portuguese government are very pleased to be able to work together with the six other countries that participated in the UNESCO recognition process, Cyprus, Croatia, Greece, Spain, Italy and Morocco, and are very committed to safeguarding and preserving the Mediterranean diet through its representative community and competency centre. It is fundamental to build a healthier and more sustainable future for all.

> We must reverse the tendency of obesity and overweight in all of the European Union, and the Mediterranean diet is a powerful ally in the transition to an increased consumption of vegetables, fruits and non-processed foods. We want to invest more in preventative health of our citizens as opposed to a curative health system. <



| Highlights |

- The Mediterranean diet is characterized by the connection between everyday behaviours, health of the body and the health of the planet.
- The cultural heritage of the Mediterranean diet has behind it a knowledge base that can be used to achieve the UN 2030 Agenda SDGs and contribute to the European Farm to Fork strategy.
- The Mediterranean represents a door to the future, calling us to re-center the lifestyle, the values and the messages that this incredible basin holds.





VIDEO CONTRIBUTIONS

Antonio Parenti

Head, European Commission Representation, Italy



FOOD DIPLOMACY

Designing a new Europe through food



Just a few days before Earth Day, Europe adopted its own climate law, which completes the work already begun with the “farm to fork” strategy and the biodiversity strategy.

So, **there is a whole set of projects that clearly focus on nature, land and food in the construction of the new Europe. It’s a construction that requires the commitment of all people, and that requires a particular commitment from Italy** – not only as one of the founding countries of the European Union, but **as a country that has a predominant role in diversity and biodiversity in agriculture**. It is a leader in Europe in the circular economy and, therefore, has a very important role to play.

In this sense, the search for a development model that is as sustainable as possible is an opportunity for Italy to be able to relaunch itself, its economy and its number of agricultural productions, without forgetting to invest in eco-sustainable tourism, activities and sectors that are fundamental for the country.

Today, we need to reflect on what can be done at the European and Italian level to improve our habitat, to deliver a more sustainable land to our children and – in doing so – give us a sustainable economy in which all citizens can actually benefit from a better world and a more consistent and protected nature.

SESSION ITALY

17.15 hours [GMT+2]



FOOD DIPLOMACY

• Agorà Italia: the crucial role of our country in the year of the G20 presidency, COP26 and the Food Systems Summit

- Luigi Di Maio • Food transition through man-nature (re)balance
- Maurizio Martina • The role of Italy for a global sustainable route change
- Riccardo Valentini • Italy as an emblematic community of agrifood sustainable cultures
- Emanuela Del Re • Partnership: beyond people, planet and prosperity
- Massimiliano Montefusco • RDS: positive shockwave for a sustainable world
- Angelo Mazzetti • Sustainability at Facebook
- Marina Lipari • The voice of climate shapers: from Tingeri to Marettimo
- MODERATOR | **Sara Roversi** | Founder and president, FFI



MODERATOR | Sara Roversi | Founder and president, FFI

In 2021, Italy hosted G20 and COP26, two key events bringing the country back to the centre of the international scene with its values and know-how.

In this session, the speakers explain what role Italy can play in bringing our production systems closer to more sustainable models, and how media companies and communication can be part of the transformation.





Food transition through man-nature (re)balance

Luigi Di Maio

Minister,
Foreign Affairs, Italy

- Earth Day offers us the opportunity to think urgently about actions to safeguard the planet. In the moment of pandemic emergency, the objective on which we must focus is even more stringent: We must rebuild better, through policies and strategies inspired by the principle of rebalancing the relationship between man and nature, and a model of circular economy.

What we are aiming for is a global recovery that can only be green, inclusive and sustainable. 2021 can and must be a decisive year for sustainability. In the very important international events that await us at the next Food Systems Summit, at COP26 and at the meetings planned within the G7 and G20, we will give much attention to agriculture and food systems. Italy will host the Food Systems Pre-Summit in July.

This event will focus the world's attention on SDG 2: to achieve a zero-hunger world. Despite progress over the past 75 years, this goal continues to recede. Italy has a great strength to offer: our model of food system that is rooted in the sustainability of agriculture and made even stronger by its millenary culture, a system that can help eliminate food insecurity.

In this sense, we believe it is essential to progressively implement what we could call a food transition of both processes and products. We will defend traditional diets because we want to pass on to new generations a food tradition that is capable of linking the quality of food to the well-being of the planet and of people. And the Mediterranean diet shows that the value of the link between people and territory makes people more aware of the impact of food on well-being. Innovation is fundamental to improve and spread the practices of the circular economy.

The invitation is therefore not only to be increasingly aware of the positive relationship between food and territory, but also to support more collaboration between public and private sectors to build new models of sustainable food and consumption. In this, we need to encourage all those industrial, social and productive realities that work for the food transition.

> We will defend traditional diets because we want to pass on to new generations a food tradition that is capable of linking the quality of food to the well-being of the planet and of people. And the Mediterranean diet shows that the value of the link between people and territory makes people more aware of the impact of food on well-being. <

We have an additional responsibility in the recovery from the pandemic crisis. We must support and spread an inclusive, sustainable and, above all, feasible food system.



Maurizio Martina

Assistant
Director-General, FAO

The role of Italy for a global sustainable route change

- We have a great objective in front of us: The understanding of the challenge to safeguard our Earth, and it is a challenge that involves each one of us. Italy plays a decisive role in this objective, as the host country of many crucial appointments in 2021: the G20, the UN Food Systems Pre-Summit and co-hosting Cop-26.

It is a unique combination that, in the context of the historical moment we are living, is even more ambitious, challenging and complex. We have an extra responsibility. Not only to celebrate, coordinate and organize, but also to move from outrage to action and from theory to practice.

First, because we cannot afford to be only outraged by the numbers, the conditions and the scenarios that we see ahead of us. Second, because awareness is certainly higher than a few years ago, but yet, it is not enough. We must transfer this change into practice, into our daily actions and commitments, make it part of our daily responsibilities. That's what FAO is focusing on.

The global food challenge is a crucial piece of this game to defend the earth, humanity and our existence on this planet. We need to be aware that a key part of greenhouse gas emissions comes from agriculture. And we must tell ourselves the truth: first, agriculture is part of the problem but it is certainly an indispensable part of the solution and, second, change is not made for free.

We must direct development, choices, actions and responsibilities by committing public and private economic resources. The good news is that change is already a reality in many actions that thousands of companies, citizens and territories put in place. We need to connect these experiences in a collective dimension and make them become a global commitment, not just the experience of a few pioneers. We need an open movement for change.

> We must tell ourselves the truth: first, agriculture is part of the problem but it is certainly an indispensable part of the solution and, second, change is not made for free. We must direct development, choices, actions and responsibilities by committing public and private economic resources. <



Riccardo Valentini

University of Tuscia
DIBAF; Nobel Peace Prize,
2007; member of
Intergovernmental
Panel on Climate Change

> Italy has the largest production of woody agricultural crops, which are not only carbon neutral but are also great carbon sequestrators: wine, oil and fruit. Italian agricultural practices are the result of a millenary culture, as is the Mediterranean diet, officially a UNESCO Intangible Cultural Heritage. <

Italy as an emblematic community of agrifood sustainable cultures

- Today, we live in a system that is much more aware than in the past and scientific data are no longer the prerogative of a few, but support the new awareness. Even the language, finally, is cleared through customs, and we can easily talk about the need to be carbon neutral.
-

The intentions and awareness are there, but we must take concrete action in the shortest possible time: We have 10 or 15 years to radically change our production systems, economy and society if we want to avoid irreversible consequences that will jeopardize the survival of the human species.

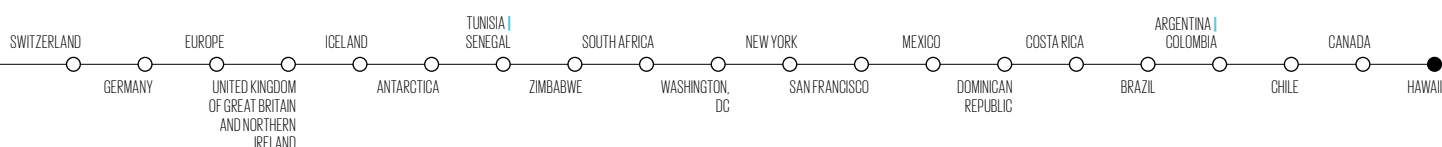
And food is at the centre of the debate: 37 percent of greenhouse gas emissions are due to the food chain, from production to consumption, mostly due to major problems of system efficiency and production.

In this scenario, Italy is a potential promoter of change. First of all, it has an extraordinary agrifood sector that is among the most developed and efficient and which is already sustainable – thanks to the presence of the largest area of organic farming in Europe.

But not only that, Italy has the largest production of woody agricultural crops, which are not only carbon neutral but are also great carbon sequestrators: wine, oil and fruit. Italian agricultural practices are the result of a millenary culture, as is the Mediterranean diet, officially a UNESCO Intangible Cultural Heritage. And starting from this cultural and agricultural heritage, several experiments have been undertaken to verify how much the citizen-food relationship can contribute to changing the system.

For example, an initiative in company and university canteens in the United Kingdom of Great Britain and Northern Ireland and Italy has shown that the introduction of sustainable menus with a low environmental impact and high nutritional content reduces emissions per meal by about 30 percent.

This means that citizens can play an important role in the fight against climate change. Italy as well, as a country, can make an important contribution: to be the excellence that gives the world models of consumption, processing and revalorization of traditional and local foods.





Emanuela Del Re

Chair, Standing Committee on the Implementation of the 2030 Agenda for Sustainable Development

> It is important that all the world's leaders, including those of the most fragile and vulnerable countries, participate in decision-making processes. <

Partnership: beyond people, planet and prosperity

- On the road to the 2030 Agenda, Italy manages to bring to the global level a concept of lifestyle and mentality that can actually be replicated in complex contexts and developing countries.

And it's not just a model that refers to the development of technology and innovation, but also to the concept of community development through agribusiness. It's an extraordinary revolution, because it aims at the empowerment of communities with a view to long-term sustainability.

In this context, Italy proposes the Food Coalition: an important initiative for the implementation of the 2030 Agenda but especially for the advancement of the agrifood system as a response to global issues and for global equity.

Endorsed by FAO, the initiative aims to network and create a widespread mentality. This is the other element of which Italy is capable: succeeding, without hidden agendas, in networking for project purposes, with extreme transparency and great capacity to connect the various actors of the society.

The Food Systems Summit fits in with the G20 in an almost automatic and natural way, since the Italian G20 is focused on the three Ps: people, planet and prosperity. A fourth P that Emanuela Del Re feels like adding is partnership: a key element and transversal to everything, which responds to the need recognized by the parties for interaction. It is important that all the world's leaders, including those of the most fragile and vulnerable countries, participate in decision-making processes. This is the real key to being able to implement the 2030 Agenda.

At the systemic level, we need to strengthen global governance in order to implement change by connecting the private sector, with its technology and investment power, and the international cooperation, that has been advancing the development of the most fragile countries for decades, with institutions, academia and organizations. Only in this way will we be able to move the 2030 Agenda project forward.



Massimiliano Montefusco

General manager, Radio Dimensione Suono (RDS)

RDS: positive shockwave for a sustainable world

- RDS's commitment to sustainability starts from very far away, but in
- 2020 it became the only broadcaster broadcasting using energy from renewable resources and working on an increasingly progressive programme for the reduction of CO₂ emissions – with the goal of having a certified sustainable budget. As part of this programme, a vegetable garden and beehives were put in the building to celebrate the preservation of biodiversity and to give all employees the opportunity to engage in bottom-up projects. This consequently amplifies

the message across the entire cross-media platform. We have the responsibility to increase awareness, and our know-how around this data plays a key role. Andy Warhol said, "I think having land and not ruining it is the most beautiful art that anybody could ever want." This is not our only goal. Thanks to the driving force of startups, collaboration and information, we must have the ability to propose a rebirth for our country in a completely different way compared to the past, enhancing the landscape and its artistry and history.



Angelo Mazzetti

Head of Public Policy, Facebook

Sustainability at Facebook

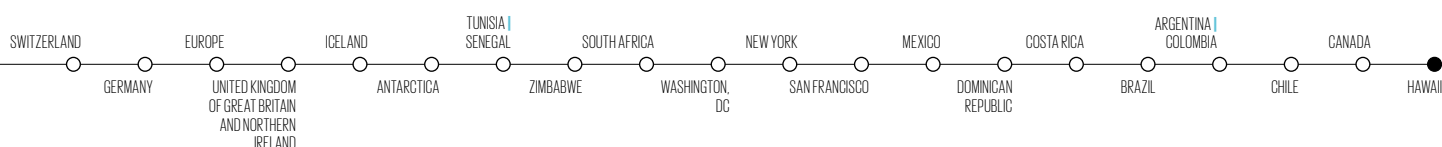
- By now, the urgency of the challenge we face is clear, and Facebook is working on several fronts to reduce the heavy impact of the platform that hosts more than 3 billion people each month.

First, it acts to decrease the energy impact related to the operation of data centres. With the reduction of more than 93 percent of emissions, today all Facebook activities are carbon neutral and 100 percent sustainable. Thus, the company ranks as one of the most important in terms of renewable energy sourcing.

Secondly, it seeks to connect users to issues and forms of activism related to sustainability through the creation of ad

hoc tools to test, distribute and increase knowledge with respect to the ecological transition and the fight against climate change. To this end, in the United States of America the "climate centre" has been launched within the Facebook app as an information centre on the theme of climate change.

Third, it focuses on training. Its Binario F space in Italy is a physical space for digital skills and works on promoting civic activism along with training producers to enable them to use digital tools more effectively to create more awareness about 0km purchasing and distribution. Digital tools play a key role. It's up to us to deploy them in the right way.





Marina Lipari

Climate Shaper

The voice of climate shapers: from Tingeri to Marettimo

- In August 2019, a commemorative plaque took the place of Okjökull the first Icelandic glacier to lose its status due to global warming. For 700 years, it had represented an immense water reservoir, and is now replaced by a letter for posterity that reads: "This monument is to acknowledge that we know what is happening and what needs to be done. Only you know if we did it."

A few days later, the FFI and FAO Climate-Smart Oceans Boot Camp began in Tingeri, a small village in the Icelandic Westfjords. In recent years, the village has seen a major depopulation of the seas, the closure of businesses and even institutions – such as its only bank.

It was a journey into the regeneration of agrifood systems, discovering the relationship between food, climate and innovation. The students came into contact with the local community, which decided to get active and promote innovation in order to restart not only the economic but also the social activity of the village.

Many companies were born with the aim of turning food waste into a raw material, such as a startup that has developed a method of processing cod skin to make it a bandage for wounds. Or again, the Blue Bank, an old bank building transformed into a coworking space where students, innovators and researchers can develop concrete solutions in line with sustainable development.

The boot camp was held with particular attention to SDG 14 "life below water." In line with this objective, the second edition of this boot camp was held in Italy's Marettimo, the farthest of the three islands of the Aegadian archipelago. Almost 54 000 hectares, the Egadi Islands Marine Protected Area enclosing the archipelago is the largest marine reserve in Europe.

Tingeri and Marettimo are two worlds seemingly distant but that have the same critical issues and the same need for tradition and innovation to coexist. They are finding a balance that strengthens both, taking to heart the goal of sustainable development. It is good to integrate these small communities into the system and involve them so that they become advocates of change in a conscious way.

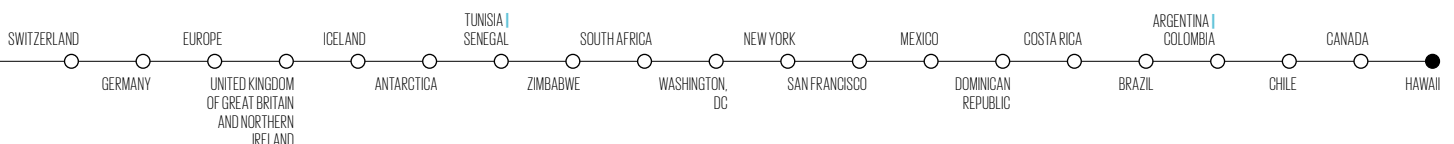
> The Food & Climate Shapers Boot Camp was a journey into the regeneration of agrifood systems, discovering the relationship between food, climate and innovation. <

| Highlights |

- Italy is able to bring to the global level a concept of sustainable lifestyle and mentality that can be replicated.
- In a year of institutional appointments, Italy has one more responsibility: to move from words to action by committing the economic resources necessary for transition.
- Italy, as a country with a millenary agrifood culture, can and must be a promoter of change.
- Media companies are tasked with creating services that make them multipliers of stories and causes. They should try to connect users to sustainability-related issues and forms of activism.



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SESSION

Earth

06:30 hours [GMT+2]



Prosperity thinking: a new methodology to scale sustainability in food

- Matteo Vignoli • Prosperity thinking: change food to save our planet
- Sonia Massari • Design, food and sustainability for a new decade of change

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



MODERATOR | Sara Roversi | Founder and president, FFI

This session introduced one of Future Food's developed methodologies: Prosperity Thinking.

An evolution of design thinking, linking micro and macro innovation through community engagement, this approach aims to design a world that fulfils all its beings' needs within the planet's ecological means: from ego to eco systems.





Prosperity thinking: change food to save our planet

Matteo Vignoli

Assistant professor,
University of Bologna;
Founder, FFI

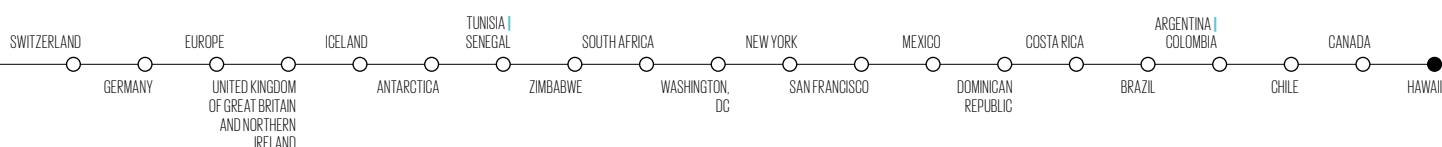
- Prosperity thinking is an innovative method used to think how food can help to regenerate the planet. When introducing innovation in the food system, two boundaries need to be respected.

The first is a lower boundary, which is a social foundation. That means that people should accept the innovation. The second is a higher boundary, that it should not go beyond the ecological ceiling, otherwise, it continues to harm the planet. Therefore, innovation should happen in a green zone, respecting sustainability for the future of the planet.

There is a need to rethink the food system to improve life and address climate change: both its causes and consequences. In order to generate this innovation, prosperity thinking evolves from design thinking and proposes a human and planet-centred approach. It's a method to construct new values, mindsets and principles to design and build our future together.

> There is a need to rethink the food system to improve life and address climate change: both its causes and consequences. <

> In order to generate this innovation, prosperity thinking evolves from design thinking and proposes a human and planet-centred approach. <





Design, food and sustainability for a new decade of change

Sonia Massari

Director of Future Food
Academy,
FFI; professor,
University of Roma Tre

- To prepare the ground for a generation of “sustainable natives,” we need to create adequate tools, products, services and systems. New systems should be fostered, in which diverse forces and skills (from producers to policy makers, from designers to educators, from managers to scientists, etc.) can actively collaborate.

The next generations should feel less like the victims and the cause of a problem, and more like an integral part of a system that can improve. It is necessary to use different types of creativities to move away from the current state of uncertainty and to develop more positive “combined” and trans-disciplinary strategies.

The time to “re-think” food according to a new approach has come. Nowadays, more than ever, it is necessary to study and work on interactions, actions, services and systems that can make a difference.

Only by applying an empathy-system thinking mindset can one find satisfactory and sustainable answers to complex food and sustainability issues.

From this perspective, design and design thinking methods can provide the methodological approach useful to change behavioural patterns and to introduce new mindsets in the agrifood sector.

> The next generations should feel less like the victims and the cause of a problem, and more like an integral part of a system that can improve. <

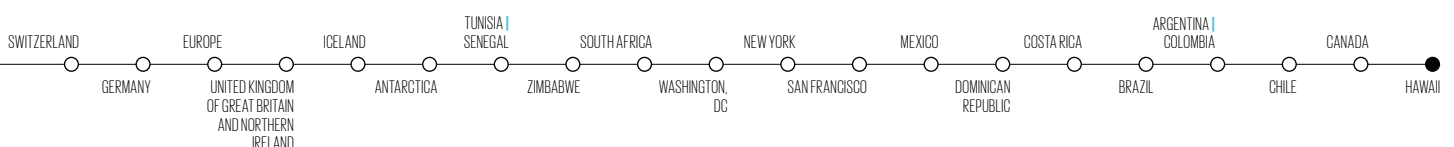
> The time to “re-think” food according to a new approach has come. <

Highlights

- Ego-system practices need to be converted into eco-system approaches, where humans are and feel a part of nature.
- Prosperity thinking is a design innovation methodology created to incorporate human needs and planetary means.
- Being the first-ever product of humanity and fostering connections between micro (human) and macro (planet), the food system is a pioneer sector for a new planet-centred methodology.

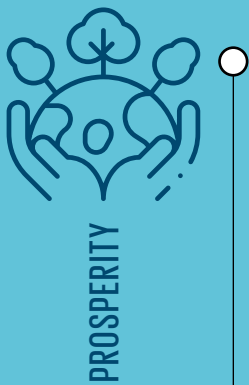


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SESSION **SPAIN**

20.30 hours [GMT+2]



Gastrodiplomacy and innovation: new directions for sustainability

Beatriz Jacoste

Food innovation in Spain

Beatriz Romanos

Regenerating the planet through agrifood systems: innovating with sense of purpose, impact and profitability for all

Juan Carlos
Arboleya

Training new generations to face current and future challenges around and within the food industry

MODERATOR | **José De la Rosa** | Gastronomic scientist and R&D, FFI



MODERATOR | José De la Rosa | Gastronomic scientist and R&D, FFI

The discussion underlined the path Spain is taking to reach a more sustainable food supply system, in which the capabilities of innovation, entrepreneurship and education are precisely aimed at tackling the challenges that make it unsustainable.

In this context, gastronomic experience was identified as a great catalyser for social change, thanks to the positive impact it can have on food waste management and nutritional intake.





Food innovation in Spain

Beatriz Jacoste

Director,
KM ZERO Food
Innovation Hub

We need new answers to address new challenges, the main one being feeding a growing population with healthy diets from sustainable food systems. This entails transforming the way we produce, distribute, consume and revalue food.

At KM ZERO, our actions revolve around three pillars: support to the entrepreneurs, support to the enterprise and communication.

With the innovations we achieved, we are now able to produce large-scale. But what we want now is producing quality products in such a way.

In order to achieve this result, we should take innovation based on the past into consideration. At KM ZERO, we are studying regenerative and resilient agriculture.

I advocate for the recovery of abused soils, but we should also pay attention to resilient agriculture, which is concerned with finding species that can resist adversities and are more compatible with the soil.

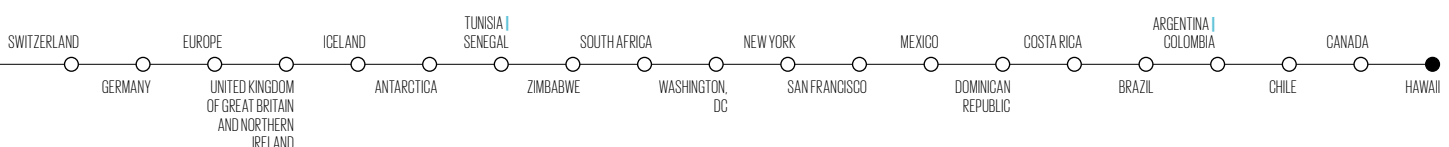
It is crucial that each solution we implement has a large-scale impact. You can find a startup that does something very cool but only reaches 100 people. That is not going to have an impact.

What agencies like FAO, FFI and KM ZERO have in common is that we want to change the world for the better and, through our sector, we can do that. We can change society and have a large impact on the economy, on people's health, on sustainability, on identity.

We can do that only if we put effort into giving resonance to the deserving entrepreneurial projects. For us, giving support to such projects is so important, as food is what makes us human and a fundamental part of sustainability.

We want to act like a bridge so that those projects can have an exponential reach, which is something we need at this moment.

> We can change society and have a large impact on the economy, on people's health, on sustainability, on identity. We can do that only if we put effort into giving resonance to the deserving entrepreneurial projects. <





Beatriz Romanos

Manager & founder,
The TechFood

Regenerating the planet through agrifood systems: innovating with sense of purpose, impact and profitability for all

- One of the most important things is understanding the challenges and making sure that the impact of the solution is the largest. One way to achieve this result is designing in an economically viable and sustainable way.
-

We should focus on where the opportunities are, and make use of the technologies we have.

Maximo Torero, economist at FAO, said we should look 10 years back at the fight against hunger in the world.

Our diet consists of mainly five animals and 12 plants, when in the world there are 300 000 varieties.

We could use technology to reconnect with the richness of nutritional elements that exist on our planet, and exploit the resources in a better way and give access to healthy food to many more people.

The pandemic put our agrifood sector under the spotlight. We saw how consumers are much more aware about production processes and quality, that they are more attracted to local foods. This is something that encouraged many suppliers to start a channel of direct distribution. And this is something that will probably stay: an aware consumer who searches for local products and starts to value the work of nutrition professionals.

We should invest much of the funds coming from the EU into digitalization, a field for opportunities for entrepreneurs. This would help address a lot of the inefficiencies of our food system.

> We could use technology to reconnect with the richness of nutritional elements that exist on our planet, and exploit the resources in a better way and give access to healthy food to many more people. <

A big part of it is also getting to know the customer and anticipate the demand, which would help define what we have to produce, and confront food loss and waste.

Tackling these problems is a big step forward for the whole climate challenge.



Juan Carlos Arboleya

Science Department
head, Basque
Culinary Centre

> We are culture, society, history – and each one of us belongs to a *form of eating* that encompasses much more than the product itself. <

Training new generations to face current and future challenges around and within the food industry

- Imagine 15 years ago in Spain: In this area, a group of cooks had the curiosity to create a more exhaustive educational path for the future of other cooks.
-

What we aimed at was furthering the potential of the gastronomic sector.

In 2005, the interaction between science and cuisine had already started. The joint action of science and cuisine has produced more *profound* dishes – from a technical but also from a conceptual point of view.

This made us understand how this combination could be implemented in the food industry to offer a new pathway for the design of products.

To this day, the food industry can still be seen as separated from cuisine (where the gastronomic element comes in).

What we should consider is that the people who are involved in those two fields are the same. We are culture, society, history – and each one of us belongs to a *form of eating* that encompasses much more than the product itself.

Science has to be revised and accompanied by other topics that have to do with nutrition: sociology and anthropology, for example.

We have to revise anthropological aspects together with social and scientific ones.

One of my friends who is an anthropologist asked: “Is an insect edible in the Western world?” This question implies a lot of issues. We try to do exactly that with the education we offer at the Basque Culinary Center: an integrated vision.

A biologist shares the same space and is involved in the same project with cooks, anthropologists and historians. These people enter new dynamics and go out of the comfort zone. Gastronomy can be a terrific driver of change (social, nutritional and economical), as it involves something ancestral: our connection, our origins.

Let’s humanize food tech; let’s humanize science. Reform this potential and the new generation of professionals who are faced with it.

We can start from a very good foundation: the new mentality of the youth. Sustainability is in their heads, and we should exploit it. Starting from here, we try to use their knowledge and especially the interrelation of knowledge, taking into account that no transferable skills exist and that beyond knowledge, there is also *spirituality*.

| Highlights |

- Scale is as important as quality and, one of today's challenges is guaranteeing both, which can be done with the help of technology, innovation and entrepreneurship.
- Technology could be used to reconnect with the richness of nutritional elements that exist on our planet and to exploit resources in a non-problematic way.
- Youth training related to the food industry and gastronomy is crucial in the context of the current climate crisis.



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VIDEO CONTRIBUTIONS

Gabriele Ferrieri

President, ANGI



PROSPERITY

Within crisis are the seeds of opportunity: towards new systems of thought

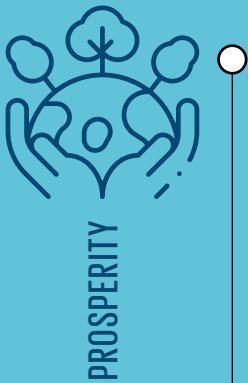


In this particular historical moment, the whole world is facing a pandemic that, other than producing health catastrophes, is generating negative effects on the economy of almost every country. But this crisis, if seen as an opportunity, can lead to a positive change for the entire international ecosystem. In order to achieve new goals in terms of social equity, economic prosperity, inclusiveness for young people, gender equality and a dignity-oriented economy in the name of innovation and sustainability, ANGI – an Italian reference point of innovation with its manifesto for the next generation – has approached the Italian government with a programme proposal that would address these environmental challenges.

Within the framework of the UN COP26 and the 2030 Agenda, **digital technological innovation is an important ally for the Italian ecological transition, as well as for an energy and environmental revolution able to revitalise the country.** Significant resources are earmarked for these issues in the proposals. We call on businesses and civil society to become increasingly involved in this race, embracing the concepts of unity, peace and protection.

SESSION SWITZERLAND

16.30 hours [GMT+2]



The golden rule

Kim Polman • Introduction of the Manifesto of Values

Anthony Bennett • Love each other

Philip Clayton • Care for each other, love our Earth and find more balance

François Taddei • Empower our youth, educate and be global citizens

Sandrine Dixson-Declève • Be good ancestors, build a life economy and work in partnership

• MODERATOR | **Anthony Bennett** | CEO, Reboot the Future



MODERATOR | **Anthony Bennett** | CEO, Reboot the Future

Switzerland presented the Manifesto of Values co-drafted by Reboot the Future, Franklin University, FFI and a selection of top speakers from the Good After COVID-19 initiative.

Articulated in 10 principles built on the maxim “treat others and the planet as you would wish to be treated,” the Manifesto aims to be a Marshall-type Plan to improve the state of the world for humans and for all life, as a matter of urgency in the coming decade.





Kim Polman

Co-founder & chair,
Reboot the Future

Introduction of the Manifesto of Values

- Many new initiatives bubbled into life as responses to the COVID-19 pandemic.
- Good After COVID-19 by Reboot the Future, Franklin University and FFI represented a unique initiative that provided over 200 leading thinkers of different age groups and regions of the world with a space for live-streamed discussion. In March 2021, marking one year since the first lockdown, a selection of top speakers from Good After COVID-19 started to draft a Manifesto of Values, which might underpin the introduction of a new type of Marshall Plan to face the next 10 years, and which was built on the fundamental principle

of the golden rule: “treat others and the planet as you would wish to be treated.” The principles that form the manifesto are:

1. Compassion and empathy, love each other.
2. Care for each other.
3. Love our Earth.
4. Balance.
5. Youth empowerment.
6. Education.
7. New citizenship.
8. The good ancestor.
9. The life economy.
10. Partnership.



Anthony Bennett

CEO, Reboot the Future

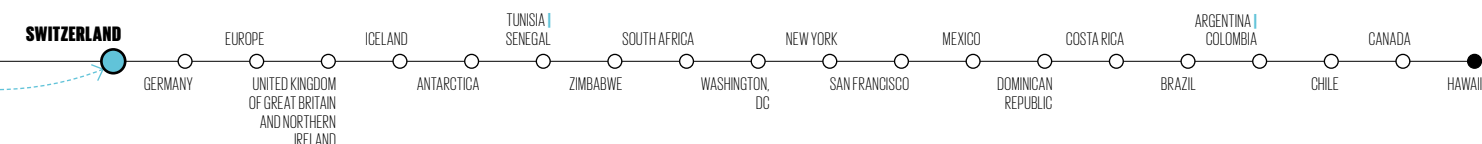
Love each other

- The first principle, “love thy neighbour as thyself,” refers to empathy and compassion, the basis of the golden rule, which Reboot the Future extends to the planet.

There must be a symbiotic relationship between man and the planet, with no predator.

From an economic point of view, it is time for humans to give back to the Earth, which has been dramatically exploited in all its resources.

From a social point of view, a Just Transition, as formulated by the International Trade Union Confederation, is imperative: the global North needs to be a partner of the global South and, together, perceive a just and sustainable future.





Care for each other, love our Earth and find more balance

Philip Clayton

President,
Institute for Ecological
Civilization and Ingraham
Professor at Claremont
School of Theology

The second principle, “we promise to care for each other,” recognizes the fundamental rights of humans. As the great spiritual traditions in the history of humanity have held, love and justice are not separable: the golden rule is the foundation of all equitable relationships and applies as much to personal relations as to nations and landscapes.

The third principle, “we promise to hold the world as sacred” includes being grateful to the Mother that gives us life by holding the beauty of the world in reverence while paying attention to the Earth’s cries of pain. We are living in a phase of planetary history in which human beings have become the major geological force.

Now, we are required to turn our power over the Earth into an act of love, learning from the Jewish prayer “*tiqqun ‘olam*,” meaning “repair of the world”.

The fourth principle, “we strive to find more balance,” reflects on the harm caused by dichotomous thought. Innovation and tradition, privilege and poverty, competition and collaboration, needs and wants, rural and urban – balance is the ultimate goal. But William Wordsworth’s poem

The World Is Too Much with Us makes us reflect on the imbalance we have often chosen: mind over spirit; domination over learning; technology over wisdom. It is time to bring back the balance of man and Earth.

> We are living in a phase of planetary history in which human beings have become the major geological force. Now, we are required to turn our power over the Earth into an act of love. <



Empower our youth, educate, and be global citizens

François Taddei

President,
Center for Research and
Interdisciplinarity

The fifth principle states: "We promise to listen to our youth", By definition, the future belongs to the youth, and they deserve to be supported in their ideas as well as see their power unleashed. Youngsters need to have their views legitimated and taken into account while making decisions that strictly impact their own future.

The sixth principle, "we promise to give education a deeper purpose," acknowledges that quality education is integral.

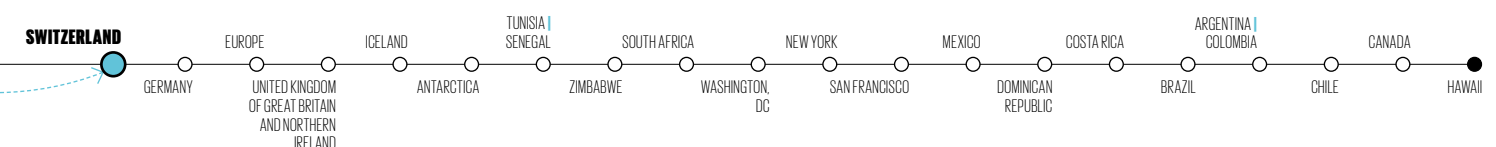
We are just a tiny part of a living system in which every element affects the whole. Hence, we must provide our children with the tools to deal with this complexity and make them find the *ikigai* (the Japanese concept of the "reason for living") that can guide them towards impactful actions for people and the planet.

The seventh principle, "we encourage a new understanding of global citizenship, which leads to a planetary ethos of stewardship," aims to promote a citizenship based on fractal democracy, that cultivates eco rather than ego consciousness.

Civic technology could play a crucial role in making the conversation really participatory for all people from a local to global scale.

> We are just a tiny part of a living system in which every element affects the whole.

We must provide our children with the tools to deal with this complexity and make them find their *ikigai* (the Japanese concept of the "reason for living"). <





Sandrine Dixson-Declève

Co-president,
The Club of Rome

Be good ancestors, build a life economy and work in partnership

- The eighth principle, “we promise to do unto all future children what we would have wanted our ancestors to do unto us,” reflects on the necessity to replace the current anthropocentric focus towards something more prosperous.
-

Future generations are inheriting a sick planet and it is up to us to act as good ancestors for them. We can do this by putting in place all the frameworks and instruments that can empower them. In a world that strive to reach the space, the good ancestor’s primary mission is to preserve the planet we have.

The ninth principle, “we promise to build a caring economy, focused on the human being rather than the human doing,” refers to a life economy that preserves the planet and comes back to the Ubuntu African philosophy of “believing in a universal bond of sharing that connects all humanity.”

We require an economy which includes all people in an equitable society, building in the transformative and virtuous elements that have risen during the pandemic.

The tenth principle, “we promise to work in collaboration,” stresses the pivotal role of diverse, multisectoral and intergenerational partnerships that represent safe spaces for collaboration in the spirit of trust, transparency and accountability. Multisectoral involvement allows co-creation and co-development by breaking down silos while optimizing a systemic approach.

> The world seeks a life economy that preserves the planet and comes back to the Ubuntu African philosophy of “believing in a universal bond of sharing that connects all humanity.”

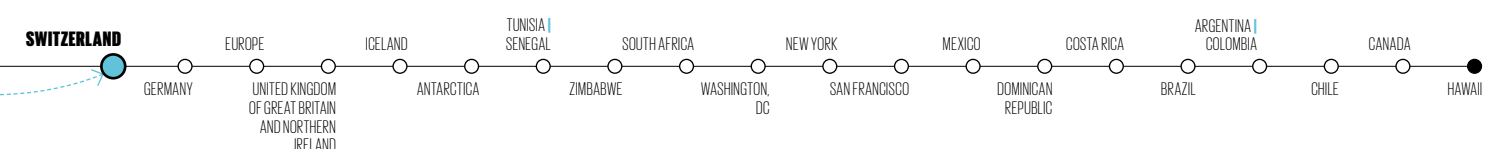
We require an economy which includes all people in an equitable society, building in the transformative and virtuous elements that have risen during the pandemic. <

Highlights

- We need a food system in which the priority is to feed people, not the commodification of food. A shift from profit for a few to prosperity for all is compulsory, as well as the rise of virtuous connections over individual flourishing.
- The agrifood sector should take a step back to the ancient practices intrinsically respectful of the planet. Indigenous People have left us a legacy of wisdom that we are asked to regenerate and pass to the future generations in order to offer them guidance.
- Adults need to listen actively to youth, since the future belongs to them and they deserve to be involved in the decision-making process.
- Multisectoral, diverse and intergenerational partnerships are the key to designing a resilient future.
- Empathy and compassion should guide the relationship among humans and between people and the planet. The COVID-19 pandemic has demonstrated how all the ecosystems are deeply interconnected and interdependent.



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SESSION GERMANY

22.30 hours [GMT+2]



FOOD DIPLOMACY

Linkages between Food, Nutrition and Sustainability

Beth Bechdol • The importance of engaging with and the crucial role of the private sector in the transformation of food systems towards sustainability

Gerda Verburg • How the Scaling Up Nutrition Movement catalyses collective action towards ending malnutrition in all its forms

Marcela Villarreal • The crucial role of peace for food security, and food systems transformation towards sustainability

Sumantra Shumone Ray & Helena Trigueiro • The urgent synergy needed: linkages between food, sustainability and health

• Panel discussion

• MODERATOR | **Cristina Petracchi** | Leader, FAO eLearning Academy



MODERATOR | Cristina Petracchi | Leader, FAO eLearning Academy

The German session covered the role of the private sector in the transformation of food systems towards sustainability; the purpose and actors involved in the Scaling Up Nutrition Movement; the hidden linkages between food security and conflict resolution; and the relationship between culturally appropriate diet, health and sustainability according to the Need For Nutrition Education/Innovation Programme (NNEdPro) models.





Beth Bechdol

Deputy Director-General,
FAO

The importance of engaging with and the crucial role of the private sector in the transformation of food systems towards sustainability

> FAO acts as an honest broker of multidisciplinary alliances and an independent, objective and neutral knowledge facilitator, helping to build connections between governments and the private sector, as well as the financial sector, cooperatives and academia. <

Achieving the SDGs is only possible if we work together across different sectors. The COVID-19 pandemic has highlighted the importance of working in partnership to respond to our global community challenges. The private sector is an integral part of our economy, and nowhere is its impact more evident than in global agrifood systems.

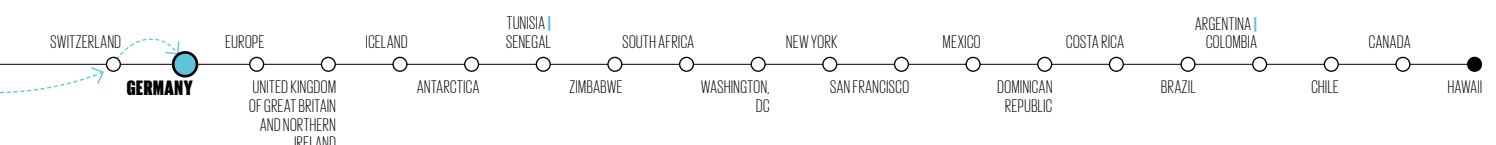
The food and agriculture sectors are poised to meet some of the world's biggest challenges. Full achievement of the SDGs would likely require investments of around USD 3.5 trillion per year. Of this amount, current Development Assistance (ODA) levels can only provide less than 5 percent. This means that the majority of investments and financing in the coming years will need to come from the private sector, and a shift in how FAO engages with the private sector, moving from funding to financing.

The new FAO Private Sector Engagement Strategy, approved in December 2020, marks an important shift in how the Organization engages with the private sector. It is a roadmap to make FAO a more agile, proactive and strategic organization in developing partnerships with the private sector and broadens areas of engagement to include fostering innovation, encouraging data sharing and dissemination, increasing SDG-aligned investments in food and agricultural systems, and SDG advocacy. Significantly, the new strategy also recognizes farmers, including small-scale family farmers as important constituents.

FAO acts as an honest broker of multidisciplinary alliances and an independent, objective and neutral knowledge facilitator, helping to build connections between governments and the private sector, as well as the financial sector, cooperatives and academia.

FAO is a provider of globally-recognised norms and standards, which can help private sector businesses better align themselves with the SDGs.

We have no time to waste if we are to achieve the SDGs by 2030, and working with the private sector for tomorrow's agriculture, food security, nutrition, rural development and the sustainable use of natural resources is an absolute.





How the Scaling Up Nutrition Movement catalyses collective action towards ending malnutrition in all its forms

Gerda Verburg

Coordinator, Scaling Up Nutrition (SUN) Movement

- SUN involves 63 countries all over the world and sees collaboration among governments, stakeholders, civil society, the private sector, organizations, donors and investors for The Better Nutrition agenda.

A healthy Earth is the foundation for life in general, and healthy food is the foundation for a healthy life.

That is why the Food System Summit this year is focused on producing healthy, nutritious and safe food that makes environmental sense. We are living in a world of silos, where organizations do their own negotiation according to their own perspective. Indeed, these silos must be broken down in order to cooperate for concrete solutions on behalf of people and the planet.

We need influence and diversity in order to reach success at all levels: from rural to global. Solutions grow bottom up, and when we talk about Earth it is like growing tomatoes: If we see them growing and can harvest them, we can be proud.

> We are living in a world of silos, where organizations do their own negotiation according to their own perspective. Indeed, these silos must be broken down in order to cooperate for concrete solutions on behalf of people and the planet. <



Marcela Villarreal

Director,
Partnerships and UN
Collaboration, FAO

The crucial role of peace for food security and food systems transformation towards sustainability

- The relationship between peace and food security is particularly important in the sustainability equation.

Our flawed world food system produces enough food to feed every single human while producing hunger at a massive scale. Among the reasons for this paradox, conflict represents a major issue: There is no sustainable development without peace, and vice versa. And this is exactly the same case for food security. There is no food security without peace, and there is no peace without food security. If we look at the world situation, we see that in those places where we have acute food insecurity with 135 million suffering, the vast majority – 77 million – is due to conflict.

There is also a very high correlation between conflict and other development variables: maternal mortality, child mortality and access to natural resources like land and water.

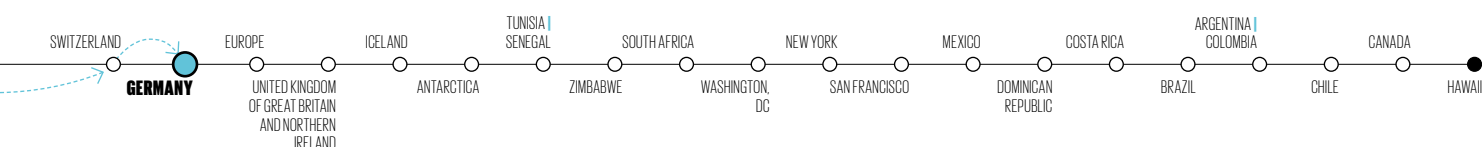
FAO data show that the incidence of conflict increases in certain areas of the world during periods of drought and drought itself is a cause of food insecurity. The hunger hotspots classified by FAO worldwide are, as a matter of fact, concentrated in conflict-affected regions. Yemen is a case in point, where conflict has left millions in urgent need of humanitarian aid and many thousands at risk of starvation.

Innovative approaches are needed to safeguard the most vulnerable communities.

The FAO-Nobel Peace Laureates Alliance for Food Security and Peace was established precisely to build a virtuous relationship, where food security supports peacebuilding, and peacebuilding reinforces food security. It has now more than 12 Nobel laureates who are helping FAO to address the relationship between peace and food security.

In the Central African Republic, for example, FAO launched a project in which Nobel laureates are helping reconstruct post-conflict livelihood, while bringing together the different actors who took part in the conflict through dialogue to help rebuild social tissue. In conclusion, peace needs to take into account food security and food security interventions need to ensure that the conditions for peace are satisfied.

> There is no food security without peace, and there is no peace without food security. <





The urgent synergy needed: linkages between food, sustainability and health

Sumantra Shumone Ray

Founding chair & executive director, NNEdPro Global Centre for Nutrition and Health

Helena Trigueiro

Global strategist, NNEdPro Global Centre for Nutrition and Health

The NNEdPro Global Centre for Nutrition and Health has been working for better research, education and innovation in nutrition with 12 regional networks working towards responses for global nutrition challenges, including the strengthening between food, sustainability and health.

Through the TIGR2ESS programme (2017-2022) with the University of Cambridge, new trajectories for sustainable and transformative agriculture are studied, as well as crop sciences and the use of water in changing climates, through to food supply, choices and health outcomes.

Within this framework, the Mobile Teaching Kitchen initiative is an award-winning model where women from vulnerable communities are trained using a “See One, Do One, Teach One” train-the-trainer approach. Qualified nutrition and health professionals, supported by trained volunteers, share culinary knowledge to improve nutrition and health as well as skills to start microenterprise within this model, promoting its environmental and economic sustainability.

> The world is living in a global syndemic, a triangle of obesity, climate change and undernutrition, all of which have effects on human health and the natural systems they depend upon. This negative synergy requires an urgent response that is efficient and equitable. <

The world is living in a global syndemic, a triangle of obesity, climate change and undernutrition, all of which have effects on human health and the natural systems they depend upon. This negative synergy requires an urgent response that is efficient and equitable. Increasing awareness of the public, industry, policy makers and colleagues on the relationship between sustainability and food is important, and bringing health into the conversation is key.

By 2050, the world is expected to host 10 billion people and food systems as we know them must change. Sustainable and healthy diets are needed, and evidence from epidemiological and clinical studies indicates that they should be higher in plant-based foods, including fresh fruits and vegetables, whole grains, legumes, and nuts and lower in animal-based foods, particularly fatty and processed meat.

Gerda
Verburg



PANEL DISCUSSION

MODERATORS: **Gerda Verburg** | Coordinator, SUN Movement
Cristina Petracchi | Leader, FAO eLearning academy



Cristina
Petracchi



Beth
Bechdol



Helena
Trigueiro



Sumantra
Shumone Ray



Marcela
Villarreal

Moving from funding to financing means allowing organizations to transfer the capital finance of the private sector into multistakeholder country-driven projects, by:

- trying to find common interests beyond misunderstandings;
- building trust;
- allowing a constructive conversation involving all the actors and keeping it going; and
- being risk conscious, not averse.

In order to face food security through peace and stability, it is crucial to listen actively to the parties involved and understand the cause of conflict to address it properly, as well as to dialogue with respect towards finding a common ground.

Furthermore, what is needed are:

- investments to solve structural issues that underlie factors for conflict (e.g. drought) and
- investments in the linkages between humanitarian and development sectors.

Whereas food security is about food accessibility, nutrition security refers to adequate supply of micronutrients: Thus, high-calorie diets can be nutrient-poor. Conveying this difference to policy makers is crucial and can be done through data shown in the form of living case studies and action-oriented intelligence.

> In order to face food security through peace and stability, it is crucial to listen actively to the parties involved. <

> The private sector is asked to invest in, and for, the planet. <

PANEL DISCUSSION

> Rethinking the poverty line by including a healthy diet, which means giving people the opportunity to make a choice, is a prerequisite. <

- The depth of data allows a depiction of what works and what does not in order to find solutions, instead of just talking about problems.

Within the Mobile Teaching Kitchen model, women do not provide just food, yet education: Empowering people to autonomously supply their food is much more valuable than just feeding them.

Furthermore, its adaptability and scalability allow it to be culturally and economically sensible to the struggles, ideologies and uniqueness of different populations, circumstances and kinds of environment. The NNedPro approach strongly believes in acting locally to scale up globally.

Spreading sustainable and healthy food patterns needs to take into account the economical barrier that it represents, given that 3 billion people worldwide cannot afford it. Rethinking the poverty line by including a healthy diet, which means giving people the opportunity to make a choice, is a prerequisite.

Moreover, governments should promote healthier food availability and nutrition awareness through incentives on healthy food and taxes on highly processed, high-fat, salty and sugary products.

As part of the Food System Summit, private sector companies need to be ready to broaden their business case up to serving clients and making sure to guarantee workforce nutrition and decent maternity leave, as well as healthcare and education.

The private sector is asked to invest in, and for, the planet, since it takes a lot of its resources and is responsible for a lot of CO₂ emissions, finally priced, even if we are just at the beginning.

Besides “naming and faming” companies that walk the talk, we should start to name and shame those who just talk. Again, data allows for the assessment of real performance in the private sector, and a new set of quantitative and qualitative indicators related to private sector contributions to the SDGs is being studied and designed. Investors would also benefit from this, being thus able to recognize those who are really walking the talk.

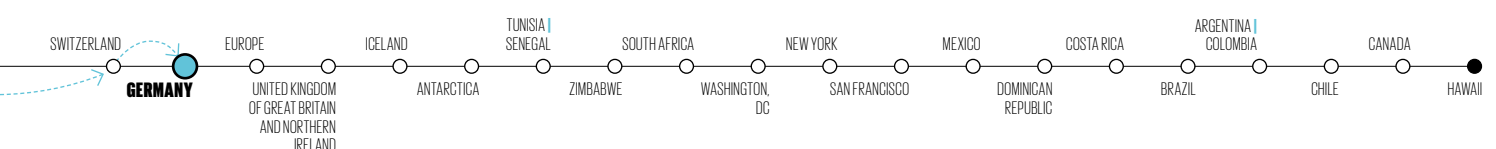
> As part of the Food System Summit, private sector companies need to be ready to broaden their business case up to serving clients. <

| Highlights |

- Given the role played by the private sector within global agrifood systems, the new FAO Private Sector Engagement Strategy makes the process more agile and proactive, includes fostering innovation, data sharing and dissemination, as well as promotes SDG-aligned investments and advocacy.
- Agenda 2030 explicitly links sustainable development and peace and calls for improved collaboration on conflict prevention, mitigation, resolution and recovery. Opportunities therefore exist for interventions in support of food security, nutrition and agricultural livelihoods to contribute to conflict prevention and sustaining peace, in order to address not only the symptoms but also the root causes of conflict.
- Enabled by lean and agile digital infrastructure, NNedPro functions as an action-orientated global nutrition think tank that harnesses the power of research, education and innovation to develop adaptable, scalable and enduring models.
- SUN Movement is committed to the idea that by transforming individuals' behaviour to align with national nutrition priorities, we can amplify reach and scale up nutrition in a faster, more equitable and sustainable way. This requires multisectoral, multistakeholder action able to reach the farthest and most vulnerable people, while measuring progress against objectives through a monitoring framework.



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SESSION **EUROPE**

16.50 hours [GMT+2]



FOOD DIPLOMACY

Food for Earth: challenges and solutions for a brighter future

- Alexandra Valkenburg • Farm to fork and biodiversity strategy: the European Green Deal faces global challenges
- Máximo Torero • Increasing resilience and efficiency while reducing food loss and waste: the paradigm of the future
- Alessandra Smerilli • Structural solutions to tackle systematic inequalities

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



MODERATOR | Sara Roversi | Founder and president, FFI

The session specifically tackled the challenges and potential solutions for dealing with the current biodiversity and climate crisis, nutrition gaps and economic instabilities, focusing on the EU's role in food systems and finding better balance with nature.





Alexandra Valkenburg

Permanent representative, Head of Delegation, Delegation of the European Union to the Holy See, the Order of Malta, the UN organizations in Rome and to the Republic of San Marino

Farm to fork and biodiversity strategy: the European Green Deal faces global challenges

The world is facing unprecedented challenges: 20 years into this century and we have already managed to miss the target to prevent biodiversity loss.

Transformational change at all levels is necessary, and many people are now really interested in taking up that challenge and making an effort to be one step closer to the Sustainable Development Goals.

The European Union has adopted its own action plan for this transformational change: the European Green Deal. With it, we achieved the goal of including our climate targets in the European legislation, and this has been a major step forward (the Fit for 55 package), together with the biodiversity strategy to protect a minimum of 30 percent of EU land and sea areas.

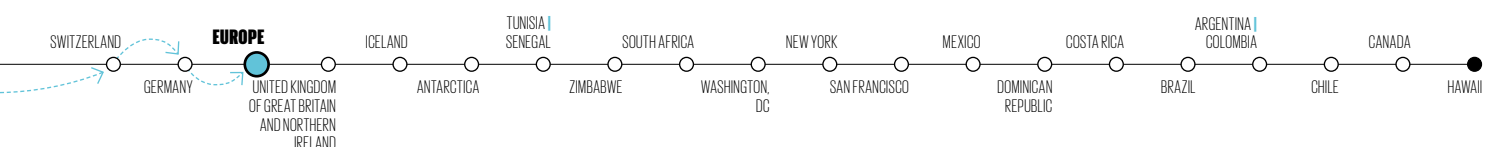
But protection is not enough. We need to restore our Earth by setting concrete targets for degraded and carbon-rich ecosystems for pollinators, for reforestation, for free-flowing rivers and for the restoration of soil, an essential non-renewable resource for the production of food.

The European Platform for Biodiversity Research Strategy will work in tandem with the EU's farm to fork strategy, to ensure the preservation of the natural environment, the improvement of food security and the income of farmers.

Multilateralism has a central role if we want to achieve our common goals. Global challenges need global responses, including the global recovery after the pandemic. If we still want to meet the objectives of the Paris Agreement and other environmental agreements, this demands even more cooperation between countries and a broad range of stakeholders. In this perspective, the Committee on World Food Security is a good example of multistakeholder engagement. I encourage every country to implement their guidelines, for instance on food security and nutrition.

From the pandemic, we surely learned a lesson: We need collaborative, multisectoral and transdisciplinary approaches to respond to global challenges.

> Global challenges need global responses, including the global recovery after the pandemic. <





Mximo Torero

Chief economist, FAO

Increasing resilience and efficiency while reducing food loss and waste: the paradigm of the future

- Under and over nutrition represent a serious public health problem worldwide. According to the State of Food Security and Nutrition in the World, in 2020, 811 million people were in chronic hunger and roughly 39 million children under 5 years old were overweight, while 677.6 million adults were obese.

While obesity continues to rise, 3 billion people in the world cannot afford even the cheapest healthy diet. Setting clear targets is imperative in order to face the current challenges, and there are three main areas to work on extensively.

First, resilience must be increased by focusing on:

- minimizing risks through early warning systems with predictive power, a one-health approach and tools like insurance schemes available to all;
- coping with risks when they occur through social protection mechanisms, while avoiding market concentration and allowing access to all.

Second, efficiency must be incremented through technologies and innovation. Aquaculture is a perfect example: Being the most efficient converter of food to flesh, fish require less skeleton investment – 1 kg of feed corresponds to 1 kg of fish vs 150 g of beef and 280 g of pork. Additionally, investment in digital technologies are central to achieving universal connection availability.

A total investment of USD 2.1 trillion could guarantee broadband worldwide, the equivalent of the reconstruction resources of a developed country.

> Investment in digital technologies are central to achieving universal connection availability. A total investment of USD 2.1 trillion could guarantee broadband worldwide, the equivalent of the reconstruction resources of a developed country. <

Third, we must reduce food loss and waste as fast as we can, since it offers a triple win:

- productivity and access to diverse food would increase, while reducing the cost of healthy diets would drop;
- efficiency in the use of natural resources would rise; and
- greenhouse gas emissions would fall.

Today, food loss represents 14 percent of global production, with a value of USD 400 billion per year, while food waste reaches 17 percent, thus 931 million tonnes of food that never reached a mouth.



Alessandra Smerilli

Secretary *ad interim*,
Dicastery for Promoting
Integral Human
Development

Structural solutions to tackle systematic inequalities

- Today, we deal with alarming data: land degradation and loss of soil fertility affect 3.2 billion people and threaten food security for a growing part of the population. Once again, the poorest and the most vulnerable are among them, paying the highest price, especially during the difficult times we are facing with the pandemic.

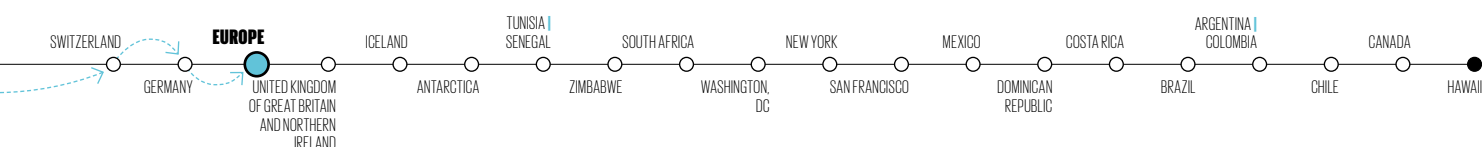
In March 2020, Pope Francis established the Vatican COVID-19 Commission with the mission of “preparing the future” in response to the pandemic and developing responses and policies towards a sustainable recovery post COVID-19 for all, not just for a few privileged ones.

Looking at long-term structural solutions, the Vatican COVID-19 Commission suggests three necessary broad shifts in the food system to protect our common home, while fighting against hunger and malnutrition:

- ➔ reinforce resilient food supply chains and distribution, both locally and internationally, ensuring infrastructures to connect small farmers with local and national markets to strengthen local communities and reduce food waste and vulnerability to external shocks;
- ➔ reduce the concentration of market power among a handful of operators, which is one of the greatest issues. Nearly 70 percent of profits from globally traded agricultural products are concentrated in the hands of few firms. This market power translates into insufficient wages for those who work in the food sector; and
- ➔ transform our food systems towards more sustainable pathways, promote a circular model of production and an efficient use of resources, enhance local knowledge and practice to ensure better protection of biodiversity in accordance with local food systems, and promote sustainable use of lands and oceans.

- The Vatican COVID-19 Commission suggests three necessary broad shifts in the food system to protect our common home: reinforce resilient food supply chains and distribution, reduce the concentration of market power among a handful of operators and transform our food systems towards more sustainable pathways. ◀

The growing impacts of climate change and the disaster displacement have exposed deep-rooted and systematic inequalities in our society. It is the time for healing and transforming, so that we may look ahead with hope and “respond to the crisis of care with a culture of care” and create a way to foster international solidarity with the goal of ensuring food security for all.



| Highlights |

- In a worldwide call for transformational change at all levels, there is a need for collaborative, multisectoral and transdisciplinary approaches to globally respond to global challenges.
- Developing resilient food supply chains, increasing efficiency through technologies and innovation, and reducing food waste and loss are primary goals to achieve at the European and global levels.
- The Vatican COVID-19 Commission recognized the redistribution of market power, the preservation of local knowledge and the promotion of circular systems as the compass to protect our common home.



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VIDEO CONTRIBUTIONS

Dennis Nyarko

Founder, After-Energy Global; Bites of Transfoodmation



PROSPERITY

Building new societies through the lens of sustainable agriculture



According to FAO, we have barely 10 years before the world food crisis kicks in, and scientists may be right in saying we only have 60 harvests left. We still do not have one decisive solution to invert this narrative, yet we do know that hunger can be cured if we continue to cast a spotlight on Sustainable Development Goals 2, 12 and 13. To do this, **we need to leverage on the only untapped resource humanity has: youth.**

Africa, for instance, has the highest number of unemployed millennials. By educating them, it is possible to create (i) a community of bright minds able to develop holistic practices to counter food planet challenges, as well as (ii) an empowered culture that leads to renewed traditions to shape a regenerative planet.

An insect-based revolution for food, feed and other uses needs to be developed and promulgated while regenerative agricultural practices to defeat hunger and sequester carbon emissions are disseminated.

If we are able to capture at least a quarter of the minds of the youth population to embark on this journey, we can tear down the invisible physical and cognitive walls that traditionally separate urban and rural areas by linking sustainability with social proximity.

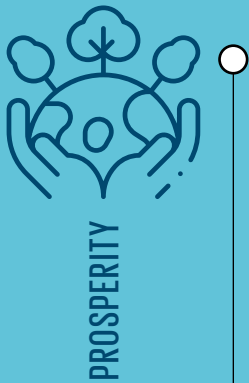
But this will only work if we embrace diversity, because **embracing diversity is a key unifying factor of the future food systems.** We therefore need to support activities leading to the establishment of such positive and forward-looking realities, without losing sight of integrating the true cost and value into the production, processing and distribution. **Nature in itself is our biggest tool in the fight against global warming,** and through sustainability work, we can fully utilize nature's contribution to the mitigation action needed to bring humanity in balance with nature.

SESSION

18.30 hours [GMT+1]

17.30 hours [GMT+2]

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND



Seeds of the future: networks, food and sustainability

- Lord Zac Goldsmith • From destruction to rebirth: sustainable food farming and land use
- Semedo Maria Helena • Climate change and its linkages to sustainability
- Sophie Charrois • Do you remember the smell of our soil? A call for experiential learning
- Raffaele Maiorano • Food for Earth Day: GFAR Collective Actions sowing seeds of sustainability
- Massimiliano Falcone • Turning complaints into proposals: now is the time
- Mohamad Hamze • Remote sensing and machine learning, tools to confront current challenges and meet future food demand
- MODERATOR | **Claudia Laricchia** | Head of Institutional Relations, FFI



MODERATOR | Claudia Laricchia | Head of Institutional Relations, FFI

The linkage between climate change and sustainability and the role of innovation and finance in tackling the climate challenge were the main topics of this session. Networks, food and sustainability were metaphorically presented as the “seeds” that are to be planted today for a better future.





INSTITUTIONAL CONTRIBUTIONS



From destruction to rebirth: sustainable farming and land use

Lord Zac Goldsmith

Minister for Pacific and the Environment,
United Kingdom of Great Britain and Northern Ireland

- It's tempting to look at the last 40 years or so when we tripled food production, and imagine that we will be able to accommodate a predicted 9 billion people by 2030 in exactly the same way.

That success has come at a huge cost, and we cannot continue to produce and consume food in the same way without causing terrible damage to our planet, massive soil erosion, unsustainable use and pollution of our water, deforestation and the degradation of carbon-rich natural habitats.

The damage that's been done in the past decades is fundamentally unsustainable. Populations of key species dropped by more than two-thirds since the 1970s, and we are losing roughly 30 football pitches worth of forest every single minute.

The human cost is becoming clearer, too. Poor land use resulted in diminishing yields for half a billion small farmers around the world. It's also the cause of vast deforestation – with agriculture, forestry and land use now representing the second-largest source of greenhouse gas emissions, causing climate change, which in turn means more droughts, floods, crops failing, pests thriving and rising sea levels.

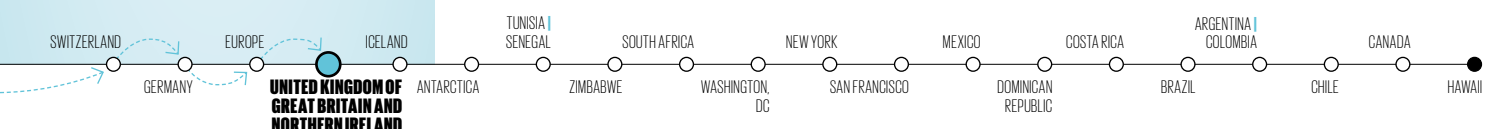
Despite the successes, hunger has been rising since 2014, and today it threatens almost 1 billion people globally. We need a radical shift in the way we produce and consume food. Sustainable farming and land use is the most important agenda of all. If we get it right, we'll be tackling several of the biggest challenges we face: reducing hunger, poverty, pollution, the likelihood of deadly zoonosis like COVID-19, climate change and biodiversity loss.

Climate change is now the United Kingdom of Great Britain and Northern Ireland's top international priority. We are putting nature at the heart of our G7 and COP26 presidencies.

Globally, nature-based solutions could provide a third of the most cost-effective solutions to climate change, and yet, nature attracts less than 3 percent of global climate finance. Our prime minister, Boris Johnson, committed last year to doubling our international climate funding to GBP 11.6 billion, and to investing at least GBP 3 billion of that in solutions that protect and restore nature. We're urging other donor countries to do similarly.

We are also building alliances of countries committed to breaking the link between commodity production and deforestation, asking producer and consumer countries to work with us to help clean up the global commodity and supply chain, and to reorient support for sustainable agriculture.

> Globally, nature-based solutions could provide a third of the most cost-effective solutions to climate change, and yet, nature attracts less than 3 percent of global climate finance. <





Semedo Maria Helena

Deputy Director-General,
FAO

Climate change and its linkages to sustainability

- When we think of Food for Earth, we must think of the agrifood systems that feed the world and how to transform those systems to be more efficient, inclusive, resilient and sustainable.

Agriculture and food systems are the world's largest economic system, measured in terms of employment, livelihoods and planetary impact. The COVID-19 pandemic has shown how fragile those agriculture and food systems are, and how sensitive our food supply chains can be.

Building green and inclusive agriculture and food systems is one of the most powerful ways to recover from the current crisis.

Green recovery must not be a side-effect of business as usual, but a well-intended vision underpinned by a strong environmental, economic and social sustainability framework that respects the rights of future generations, enhances climate action aimed at carbon neutrality by 2050 and protects biodiversity.

Better production means ensuring efficient sustainable consumption and production patterns, inclusive food and agriculture supply chains at local, regional and global levels.

Better nutrition aims at ending hunger, promoting nutritious foods and increasing access to healthy diets, which can be fostered by tackling food loss and waste and making sure that markets and trade are accessible and open.

Better environment is about protecting, restoring and promoting sustainable use of terrestrial and marine ecosystems, and combating climate change through reduction, reutilization, recycling and residual management approaches.

> Green recovery must not be a side-effect of business as usual, but a well-intended vision underpinned by a strong environmental, economic and social sustainability framework that respects the rights of future generations, enhances climate action aimed at carbon neutrality by 2050 and protects biodiversity. <

A better life implies reducing inequalities – between urban and rural, rich and poor, men and women – and promoting inclusive economic growth. To reach these aspirations, we must – all of us together – overcome complex and intertwined challenges. We need to do so in a way that is both economically profitable and environmentally friendly. We have the science, the evidence, the technology and the expertise.



Sophie Charrois

President, Oikos International

Do you remember the smell of our soil? A call for experiential learning

- How often is it that we pay attention to what is happening on the ground and to people's real, honest, vulnerable stories in our classrooms? We may talk about food, farmers markets and numbers related to these aspects, but how much do the numbers tell us about how food smells and tastes and what people experience along our supply chains? Creating opportunities to experience the territory is a fundamental part of how we as

human beings learn and innovate, and the sense of togetherness and intimacy these spaces open is a critical ingredient on our way towards sustainability. Looking at the multiple examples out there, we see that it is possible to make education a space for this way of learning beyond theory. It is in our agency as students and educators to step up and make this vision a reality, both for the thriving of people and the planet.



Raffaele Maiorano

National delegate for SDGs and sustainable development in Confagricoltura; chairman of GFAR, FAO

Food for Earth Day: GFAR Collective Actions sowing seeds of sustainability

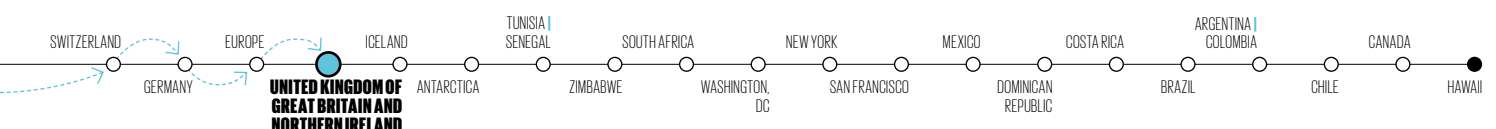
- GFAR is a collective movement that is trying to shape the future of agriculture and food. We put the smallholder farmers at the very centre of agricultural innovation, shaping and delivering opportunities and the future they desire.

A project I care very much about is the one we started on "forgotten" or "neglected foods" that have immense potential on sustainable food systems.

Four food crops (wheat, maize, rice

and soy) provide two-thirds of the world food supply, but there are many others with immense potential within sustainable food systems. These crops provide healthy nutrients, contribute to resilience to changing weather patterns and disease from pest, and also constitute farmers' livelihood and cultural traditions.

We are working on a "forgotten food manifesto" written by 1 billion farmers for farmers, researchers and innovators.





Massimiliano Falcone

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

Turning complaints into proposals: now is the time

- We are speaking of food today but, actually, Earth Day was born 51 years ago because of industrialization. It spoke to how the automotive, transportation and oil industries were destroying the planet. Fifty-one years ago, 20 million people were demonstrating on the streets. Now, we should move from protests to proposals: new ideas in order to change in the direction of sustainable development.

Agriculture became a central topic of Earth Day as it involves the way we

eat and produce. Communication can be fundamental in creating an appeal for sustainable food and a healthy way of living. If we started choosing food based on the supply chain – how sustainable it is – and not just because of the brand that is behind it, and if brands started to become sustainable because of this, we could really take care of our planet.

All the main stakeholders' actions should focus on making sustainable food "sexy" and "cool."



Mohamad Hamze

Member, Bites of Transfoodmation

Remote sensing and machine learning, tools to confront current challenges and meet future food demand

- At the Remote Sensing Centre in Montpellier, we aim to derive parameters from satellites and radar platforms using AI and work to deliver advice to support farmers and governments in decision making processes. Thanks to the development of technology, the way we use and elaborate data has developed. The actions needed towards meeting the SDGs highlight the significance of digitalization and innovations as solutions to improve the current state of the food systems. The structure of

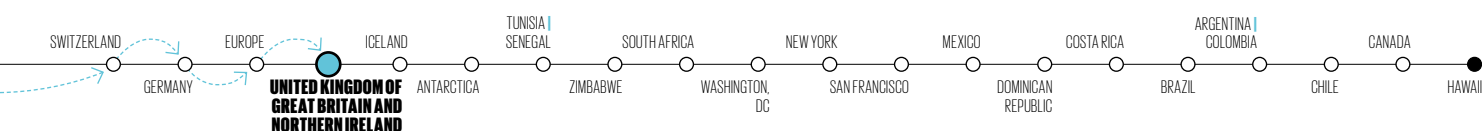
the food system is dynamic and driven by complex trends: urbanization, population growth, climate change. Actors of the food system are also interdependent and can influence each others' incentives and capacities to act. The complexity of food systems requires a holistic and coordinated approach, because the challenge of food to achieve sustainable development and meet future food demand requires integrated actions taken by all stakeholders of both private and public sectors.

Highlights

- We should aim at shifting the power of the market from destruction towards sustainability and renewal.
- Building green and inclusive agriculture and food systems is one of the most powerful ways to recover from the current crisis.
- Coming into contact with people and their experiences is important if we want to move towards sustainability, and the realm of education could be pivotal in creating a space where this could happen.
- Communication and narrative play a crucial role in the transition towards a more sustainable food system.
- The actions needed to meet the SDGs highlight the significance of digitalization and innovation as solutions to improve the current state of the food system.



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SESSION ICELAND

12.15 hours [GMT+2]

10.15 hours [GMT]



CLIMATE SMART ECOSYSTEM

The future of oceans: from energy shift to greener options to the transformational power of education

Gunnar Ólafsson

The end of the road is the start of our journey

Catherine Chambers

Interdisciplinary research for the future of small-scale fisheries

Ingi Björn Sigurðsson

Seaweed revolution: towards a new blue-green future

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



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

This session presented Iceland, the “Land of Fire and Ice,” which is recognised worldwide as a leader in cultural, social and environmental sustainability.

As an island nation, its community is intimately connected to the ocean, and new challenges – yet great opportunities – are rising with the aim to ensure a healthy ocean for healthy people on a healthy planet.





The end of the road is the start of our journey

Gunnar Ólafsson

Founder, Djúpið

- Djúpið is a non-profit innovation shelter in the Westfjords giving support to local innovators and entrepreneurs and providing networking opportunities for young people.

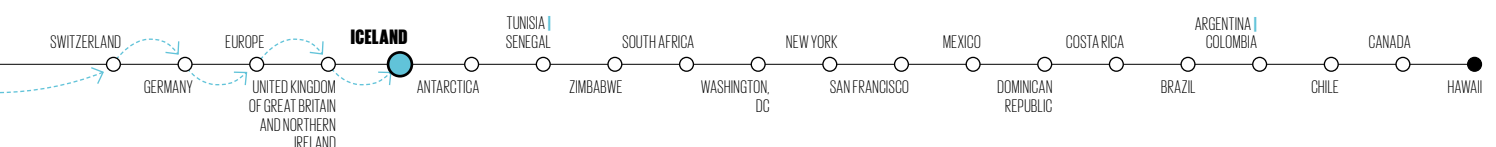
With 13 new craters recently opened up in the Reykjanes Peninsula, Earth has reminded Icelanders that people are unarmed when faced with the power of nature, and we better cope with that.

In Iceland, legislation has been cleared up for the macroalgae industry, which is important for the health of the ocean and marine innovation. Moreover, nationwide initiatives have been developed towards an electric fishing fleet, a substantial change in the race to react to pollution.

Iceland has also done groundbreaking research in marine biology, blue economy innovation hubs are expanding and many government initiatives towards rural knowledge clusters are being implemented. Iceland is seeing new hope, and the rise of social innovation represents a community that is focusing forward.

With seaweed farming, a new industry is born and, thanks to the great wealth of data provided by local research centres, venturing into a new chapter on the sustainable life and use of the ocean is real.

> With groundbreaking research in marine biology, blue economy innovation hubs, legislations for the microalgae industry and government initiatives towards rural knowledge, Iceland is seeing new hope. <





Catherine Chambers

Research scientist,
Stefansson Arctic
Institute and University
Centre of the Westfjords

Interdisciplinary research for the future of small-scale fisheries

- Significant practice and policy gaps in existing Arctic economic activities can lead to unsustainable development, and increasing geopolitical tension is highlighting the importance of respecting different value systems and finding common values – helping to strengthen the links between Arctic and non-Arctic entities.

When talking about sustainable fisheries, the ecological and economic aspects represent key areas of interest, yet we need fishing practices to also be a part of equitable systems. Accessibility, cultural identity and local empowerment themes are often left out of the conversation, yet the interaction between people and the ocean needs to be explored from a social lens.

Nowadays, there is a dangerous infodemic to fight: capturing fisheries are demonized *a priori*, whereas a holistic view is requested in order to critically evaluate the current operations, whether virtuous or not.

Icelanders are the ocean, their life(style) strictly depends on it, and there is the willingness to protect it in order to provide next generations with opportunities that are economically, environmentally and socially sustainable.

Justice and Sustainability for the Arctic (JUSTNORTH) is a European project designed to explore the multitude of ethical systems that coexist in the Arctic, and specifically it is investigating justice and equity across small-scale fisheries

in Iceland. It aims to develop conceptual frameworks, indices and a negotiation tool for determining the viability of economic activities, as well as clarify policy, legal and regulatory pathways for implementing ethic-based decision-making principles.

The University Centre of the Westfjords is answering the call for interdisciplinarity to tackle the future's challenges and, most of all, it celebrates connections and a network of people supporting its students who are the real change makers.

> Icelanders are the ocean, their life(style) strictly depends on it, and there is the willingness to protect it in order to provide next generations with opportunities that are economically, environmentally and socially sustainable. <



Ingi Björn Sigurðsson

Board chairperson,
Eldey Aqua

Seaweed revolution: beyond cod

- Although kelp forests cover less than 2 percent of the total area of the ocean, they account for approximately 50 percent of the global carbon sequestered in ocean sediments. Thus, starting to recognize their role in the ecosystem and the endless opportunities for the future is pivotal. By using just 10 percent of the ocean to farm seaweed, it is safely possible to store up to 40 gigatons of carbon dioxide per year, the equivalent of the global emissions on a yearly basis.

There are thousands of seaweed species worldwide, and Iceland is particularly rich in six crucial species:

- sea lettuce;
- dabberlocks;
- sugar kelp;
- oarweed;
- dulse; and
- red sea plume.

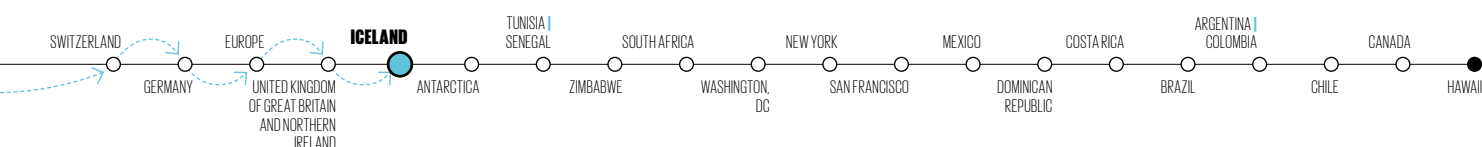
> By using just 10 percent of the ocean to farm seaweed, it is safely possible to store up to 40 gigatons of carbon dioxide per year, the equivalent of the global emissions on a yearly basis. <

Most of the production and processing of seaweed is currently concentrated in Asian countries, but the European sector is working hard to enhance its role in the seaweed value-chain. In particular, Eldey Aqua represents the first company that cultivates seaweed through the deployment of the first Integrated Multi-Trophic Aquaculture (IMTA) in Iceland.

Seaweed farming can be on-shore, off-shore or near-shore, as well as co-located with other water-based ventures – such as windfarms – or harvested directly from the wild. Indeed, Eldey Aqua has integrated seaweed with fed and non-fed mariculture in order to reduce environmental impact and increase productivity using an ecosystem-based approach.

The seaweed market is expected to grow by 12 percent a year until 2024, with Europe as the top importer of seaweed products worldwide.

The kelp value chain is extremely rich in outputs (animal feed, food and beverages, fertilizers, cosmetics, additives, bio-packaging, biofuels, supplements) for an expected value of almost EUR 10 billion in the European market by 2030.

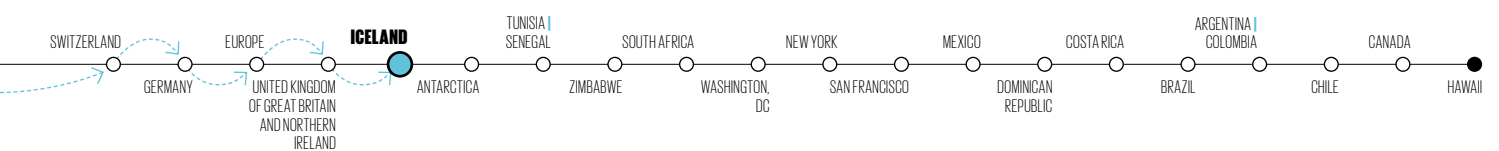


| Highlights |

- Icelanders depend on the ocean, and new fishing opportunities that are economically, socially and environmentally sustainable are needed for the next generations.
- In an interconnected world, interdisciplinarity should be the keyword of future education and research, including the topic of fisheries.
- JUSTNORTH recognizes the urgency of including the concepts of justice and equity in the governance of fisheries.
- Seaweed is a sustainable food source with the potential to play a major role in providing food security worldwide, and Eldey Aqua is a pioneer in its farming through the IMTA ecosystem-based approach.



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SESSION ANTARCTICA

12.45 hours [GMT+2]

20.45 hours [GMT+10]



CLIMATE SMART ECOSYSTEM

Discovering climate change: the extreme lesson from Antarctica

From the most extreme place on Earth, man is studying the effects of our presence on Earth.

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

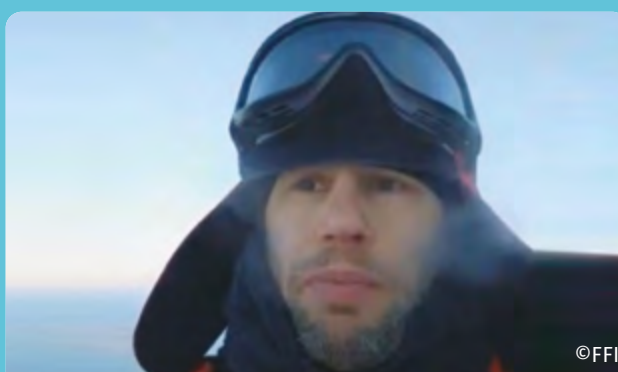


VIDEO CONTRIBUTIONS

Marco Buttu

Software engineer, National Antarctic Research Program and National Institute for Astrophysics

Voices from the Edge of the World



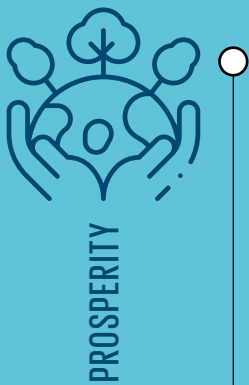
Antarctica is extreme: The actual temperature is minus 60 degrees celsius, and it is expected to drop down to minus 80 degrees in two weeks, when the sun will disappear and the night will last for more than three months. Currently, with my team of 12, we represent the most isolated people on Earth, together with the 13 people living in the Russian Vostok Station. Concordia is a permanent station on the Antarctic Plateau, jointly operated by scientists from the Italian National Antarctic Research Program (PNRA) and the French Polar Institute (IPEV). From February to November 2021, the 17th mission *ItaliAntartide* by PNRA focused on seismic, astronomic and geomagnetic research. **We study the atmosphere and the ice in order to understand how the climate has evolved and how it is going to evolve.**

We study astronomy by taking advantage of the plateau's ideal conditions – absence of humidity and light pollution. We measure the Earth's magnetic field, which protects us from the solar wind. And we run such studies in darkness. Take care of the planet, since when we are back, we want to see everything as we left it, or rather, improved.

SESSION **TUNISIA AND SENEGAL**

14.00 hours [GMT+2]

13.00 hours [GMT+1]



Power to youth: responsible investment in food systems for sustainable development

Arbia Labidi • Introduction to the RAI programme in Tunisia

Emma Ouertani • From strategic planning to the implementation of the *Pôle de réflexion sur l'investissement des jeunes agro-entrepreneurs* (PRIJA) and agri-accelerator hub

Ahmed Yangui • Towards an enabling environment for youth investment: PRIJA and its main recommendations

Senda Hafsi • Presentation of the Investment Accelerator Hub

Saima Ben Youssef • Tunisian agri-accelerator hub: voices from youth

Moussa Baldé • Emerging Senegal: promoting human capital through agriculture

Gorgui Faye • Integrating young agripreneurs in Senegalese agricultural value chains

Fara Ndiaye • Towards the creation of a unitary framework of young agri-entrepreneur networks in Senegal

MODERATOR | **Cristina Petracchi** | Leader, FAO eLearning Academy
| **Yannick Fiedler** | Programme officer, FAO



MODERATOR | Cristina Petracchi | Leader, FAO eLearning Academy
| Yannick Fiedler | Programme officer, FAO

The goal is to move towards more sustainable and resilient African food systems and focus on the experience and lessons learned in supporting responsible youth agricultural entrepreneurship in Tunisia and Senegal.

With this in mind, this session started with FAO's partners in Tunisia who presented the work being done to address the challenges facing young people. Finally, two young agri-entrepreneurs reported on their experience as beneficiaries of incubation services.





Arbia Labidi

National coordinator RAI programme, FAO Tunisia

Introduction to the RAI programme in Tunisia

- In Tunisia, youth unemployment rates reach up to 35 percent, especially in the northwestern region. At the same time, many rural regions with high unemployment rates have an important territorial development potential based on the differentiation, labelling and marketing of several agricultural products. In this context, substantial efforts have been made to support investments along agricultural value chains and to encourage Tunisian rural youth to become agri-entrepreneurs,

therefore, fighting an unemployment rate that has been very high. FAO, the National Institute of Agricultural Research of Tunisia (INRAT) and the Tunisian Agency for the Promotion of Agricultural Investment (APIA) have undertaken initiatives aimed at diagnosis of the actual context following a specific request from the Tunisian Ministry of Agriculture and Rural Infrastructure that resulted in supporting the programme for responsible investment in agriculture (RAI) and food systems.



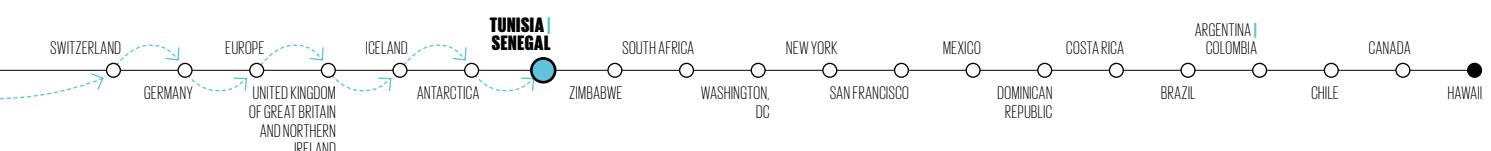
Emma Ouertani

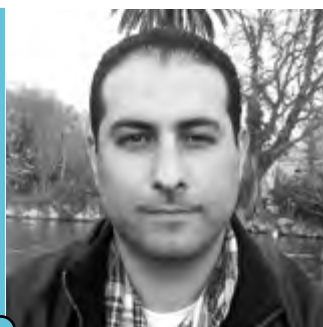
Associate professor, Mograne Agricultural High School and INRAT

From strategic planning to the implementation of the PRIJA and agri-accelerator hub: the case of Tunisia

- Through the application of the strategic planning tool developed with the support of the Swiss Federal Office for Agriculture, INRAT conducted a holistic diagnosis of the environment of young Tunisian agri-entrepreneurs. It resulted in the identification of one of the most vulnerable regions (the northwest of Tunisia) with a particularly high degree of investment needs and corresponding opportunities for young entrepreneurs, especially in the olive oil and goat dairy value chains. In addition, a roadmap with 26 solutions was drafted and validated through a

multistakeholder workshop. Stressed within the roadmap are the need for: a conducive institutional framework, adaptable and higher-performing training programmes, better coordination and communication, and higher competitiveness of the sector, as well as other practical solutions more specific to studied value chains. To further refine and operationalize the roadmap, a multiactor platform (*Pôle de réflexion sur l'investissement des jeunes agro-entrepreneurs*, or PRIJA) was set up by INRAT with support from FAO and APIA.





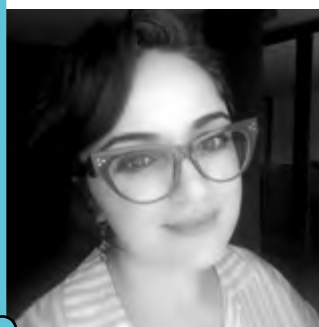
Ahmed Yanguï

Associate professor, INRAT

Towards an enabling environment for youth investment: PRIJA and its main recommendations

PRIJA consists of three multistakeholder working groups addressing the main challenges identified in the first phase of the programme and trying to make them concrete. The focus of the discussion in the different working groups were effective institutions and coordination, accessible financial services and incentives that catalyse youth investment, and available and accessible information. In particular, the priorities have been:

- harmonising procedures and clarifying the roles of each institution throughout the investment cycle; establishing a key exchange hub meeting between the different stakeholders; multiplying the youth voice by capitalizing and supporting the experience of one-stop shops and business centres; stimulating the territorial approach for youth-led investment orientation;
- strengthening the access of young people to public incentives; operationalizing the new financing instruments such as crowd-funding; and
- the establishment of sustainability communication and awareness strategy oriented to young people.



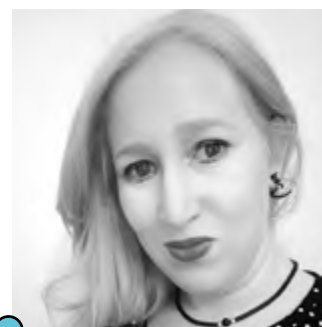
Senda Hafsi

Senior engineer and trainer, APIA

Presentation of the Investment Accelerator Hub "De la chenille au Papillon"

The agri-accelerator hub was set up by APIA with support from FAO and INRAT. It was launched to support young agri-entrepreneurs to invest in the sheep-dairy sector and the olive oil sector in the Governorate of Béja. The objective of the hub is two-pronged:

- strengthen the competitiveness of young agri-entrepreneurs in order to penetrate local and international markets; and
- raise the attractiveness of the agrifood sectors, currently characterized by a high yet unmaterialized potential for investment and job creation. Special emphasis is placed on responsible investment projects, which contribute to the territorial development of the region, and which are likely to have a positive socio-economic and environmental impact. Young people have been supported in identifying opportunities and designing efficient and sustainable solutions. A series of short-term recommendations formulated by PRIJA are expected to be pilot-tested through the agri-accelerator hub coordinated by APIA.



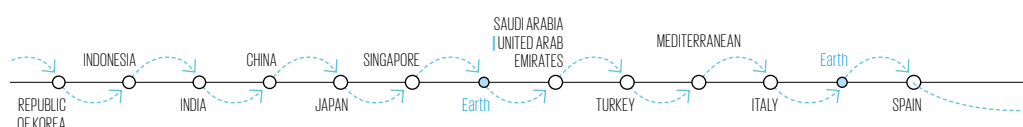
Saima Ben Youssef

Young agri-entrepreneur of the Governorate of Béja

Tunisian agro-accelerator hub: voices from youth

The *Association Festival des Fromages et promotion de patrimoine de Béja* lays its foundations in the awareness that starting an agricultural business is extremely difficult at the beginning, given the lack of support and guidance.

It is an association that aims at enhancing collaboration at the territorial level to increase the image and value added of local products and regional crafts. Many local producers work together in this association and have created a platform to help farmers sell and promote their products in a virtual shop.





Emerging Senegal: promoting human capital through agriculture

Moussa Baldé

Ministry of Agriculture and Rural Equipment, Senegal

> Since the Malabo Summit in 2014, which reconfirmed agriculture as a critical policy initiative for African economic growth and poverty reduction, Senegal is committed to a remarkable set of goals to be attained by 2025 through an approach focused on shared prosperity and livelihood improvement. <

Senegal is one of the most stable countries in Africa, which since 2014 has been growing, driven by public investment in agriculture and infrastructure. The Plan Sénégal Emergent (PSE), a development model adopted by the country to accelerate its march towards growth, functions as a benchmark for economic and social policy in the mid and long term. However, unemployment, especially among young people, remains a major challenge and addressing the question is particularly urgent given that more than 60 percent of the population is below 24 years of age.

The agrifood sector is key in the contribution to job creation. The domestic demand for agricultural products is very dynamic, driven by public spending and household income, including migrants' remittances. In addition, agricultural development is at the heart of government priorities, especially concerning rice self-sufficiency, groundnut production and horticulture.

Today, we are all aware of the dramatic effects of climate change, which can nullify all the agricultural efforts towards growth, especially in the sub-Saharan area.

Since the Malabo Summit in 2014, which reconfirmed agriculture as a critical policy initiative for African economic growth and poverty reduction, Senegal is committed to a remarkable set of goals to be attained by 2025 through an approach focused on shared prosperity and livelihood improvement. We are working to make Senegal agriculture productive, competitive, sustainable and diversified, able to provide stable income to all the value chain actors.

Structural transformation of the African economy necessarily encompasses the modernization of the agriculture and rural life through:

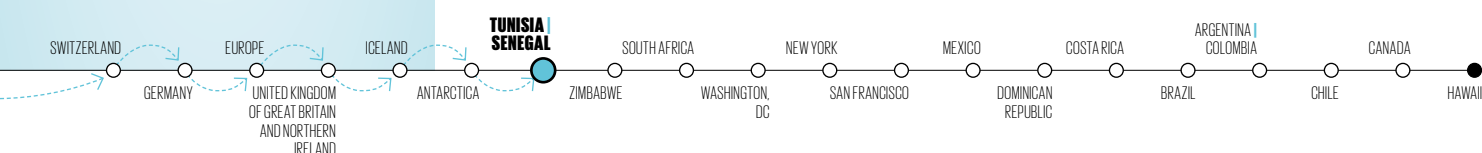
- the restructuring of family farming;
- the promotion of high value-added agriculture; and
- the organization of producers in cooperatives.

According to recent data, in 2018 Senegalese agriculture absorbed 45 percent of jobs with an added-value of 15.1 percent of GDP.

In order to contain the impact of COVID-19, the Government accelerated its action plan by using agriculture as a driver for economic and social recovery.

Three programmes have been identified with the aim of reaching food and nutritional security in Senegal:

- Programme National d'Autosuffisance en Riz;
- Programme National de Rélance et Développement des Cultures Céréalières; and
- Programme National de Rélance de l'Horticulture.





Gorgui Faye

President, Réseau Africain pour la Promotion de l'Entrepreneuriat Agricole (RAPEA)

Integrating young agripreneurs in Senegalese agricultural value chains

- In Senegal, youth unemployment constitutes a major challenge. Since 2015, FAO has been working to make Senegalese agrifood systems more youth-inclusive.

This is being done through its Integrated Country Approach (ICA) for promoting decent rural employment and with the RAPEA multidisciplinary network, which was established to promote the development of agricultural entrepreneurship through the organization and enhancement

of agricultural sectors and value chains in an approach to practicing sustainable agriculture and creating income and decent jobs for the benefit of populations and young people, in particular.

To achieve its objectives, RAPEA relies on the organization of seminars, workshops, coaching and support programs, and the development of strategic partnerships with organizations and associations with a similar purpose.



Fara Ndiaye

National coordinator, Confederation of Networks of Young Senegalese Agri-Entrepreneurs

Towards the creation of a unitary framework of young agri-entrepreneur networks in Senegal

- Senegal has a vibrant environment of young agri-entrepreneurs' and farmers' networks. FAO and Rikolto have initiated a structured dialogue among these organizations to support coordination.

The objective of the Confederation of Networks of Young Senegalese Agri-Entrepreneurs, founded in the context of this dialogue, aims at enhancing inter-youth organization coordination and increasing responsible agricultural investment in Senegal. The confederation counts 32 youth colleges, 40 start-up organizations and more than 1 800 youth who adhere

to one of the confederation's member organizations. The main needs of young agri-entrepreneurs in Senegal identified: inclusion in decision-making processes; access to finance, information, water, inputs and land; and the facilitation and incentivization of business development.

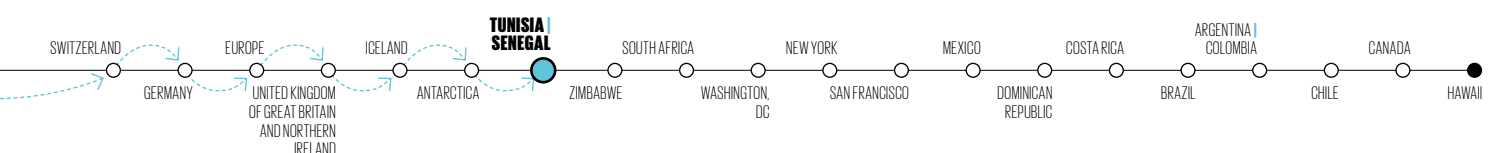
Helping young agripreneurs develop self-employment in the domain of agriculture will also contribute to stopping youth from illegal emigration and will give them the opportunity to stay and develop their own business in their country.

Highlights

- Empowering young agri-entrepreneurs to create their own enterprises is fundamental to achieving many of the Sustainable Development Goals. In countries like Tunisia and Senegal, young people are affected by high unemployment rates and are often forced to migrate from rural areas in search of opportunities. Rural areas are thus abandoned, concentrating most of the poverty and losing the innovation that youth could bring to the agricultural and food sector.
- Responsible investment in agriculture and food systems is necessary to achieve food and nutrition security, boost sustainable economic development in rural areas, empower young women and men, and use natural resources sustainably.
- In Tunisia, a multistakeholder platform (PRIJA) and an agri-accelerator hub were established in order to elaborate innovative solutions to boost responsible agricultural investment as well as to provide support and incubation services to young entrepreneurs working in the olive oil and goat dairy value chains in the region of Béja, which is particularly affected by young unemployment.
- In Senegal, multidisciplinary hubs like MIJA and RAPEA act as the framework within which youth can be empowered and trained to realize their business ideas.



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SESSION **ZIMBABWE**

21.30 hours [GMT+2]



FOOD DIPLOMACY

Sustainability is female: women's empowerment for a better future

Trish Hakata
Brenda Kandiero
Chiedza Manhovo
Gracious R Shonhai

Panel discussion

MODERATOR | **Mercy Chatioka** | Food technologist & co-founder, Pik It Fresh Farms



MODERATOR | Mercy Chatioka | Food technologist & co-founder, Pik It Fresh Farms

This session unveiled the key role of Zimbabwean women in agriculture, taking us along their quest to resuscitate the sector and (re)shape the agrifood system in a sustainable, circular and empowered way in order to reach food security and a prosperous future for the whole country.



PANEL DISCUSSION

Sustainability is female: women’s empowerment for a better future



Trish Hakata

Founder,
Thymeless Gourmet



Brenda Kandiero

Nutritionist
& technical manager,
Profeeds



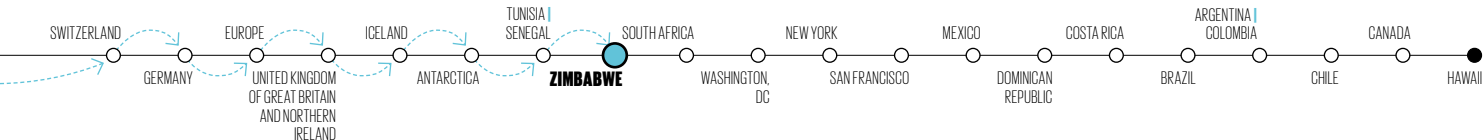
Chiedza Manhovo

Founder,
The Meat Bar



Gracious R Shonhai

Founder,
Mas Vegas Goats



PANEL DISCUSSION

> Opportunities are endless in agriculture, and apart from growing crops and domesticating animals, women are now involved in agribusiness value chains. <

> Traditionally, Zimbabwean women have played a silent and peripheral role in agriculture, but a new generation of young female farmers is taking up space. <

- Traditionally, Zimbabwean women have played a silent and peripheral role in agriculture, but a new generation of young female farmers is taking up space, reviving the sector and trying to address social inequalities and financial obstacles through their empowerment.

Empowerment allows women to exercise strategic control over their own lives and renegotiate their relationships with others, while improving the country's productivity by taking advantage of the female workforce to reach food security. At the same time, Zimbabwe urges men's empowerment to fight the prejudices around women in agriculture.

Zimbabwean women started networking and sharing knowledge and practical techniques on agriculture, getting the most out of their creativity and business ideas. Opportunities are endless in agriculture, and apart from growing crops and domesticating animals, women are now involved in agribusiness value chains, a development that creates more economic value and more job opportunities.

Among the challenges affecting women in agriculture in Zimbabwe, the ones that feel the most urgent are:

- **gender inequality** – which prevents women from feeling fulfilled;
- **equity** – accessing credit facilities represents a barrier for women, both in urban and rural areas;
- **training** – women need to be equipped with the knowledge needed to run their business and make their ideas concrete;
- **nutrition** – working requires that people be healthy and health comes from good nutrition, which is still an issue for the country.

Pik It Fresh farm is a horticulture production farm supplying wholesalers, retailers and hotel chains with fresh farm produce in and around Zimbabwe. It is currently working to acquire Global Gap certification to access the global export market.

Profeeds is a stock feed manufacturer and an agro input supplier to small, medium and large-scale livestock farmers all around Zimbabwe.

Pig Berry Farm is in control of its whole value chain by directly linking to it – from farm to consumer – via The Meat Bar butchery, which sells meat directly to the main, final consumer.

> Partnering, circular and closed systems are implemented in Zimbabwe through waste mitigation technologies that are able to (re)integrate food waste and farm's remnants into the value-chain in the shape of biogas as well as organic fertilizer. <

Thymeless Gourmet is a farm-to-fork restaurant with three main goals:

- providing clients with km0, healthy and nutritious food;
- managing food waste responsibly; and
- empowering local farmers to ensure climate-smart models at every point of the value chain.

Mas Vegas Goats seeks to provide a balanced diet to underprivileged Zimbabweans by producing quality, low-cost goat meat. Malnutrition (through a lack of protein-rich foods) is one of the biggest causes of death in the country.

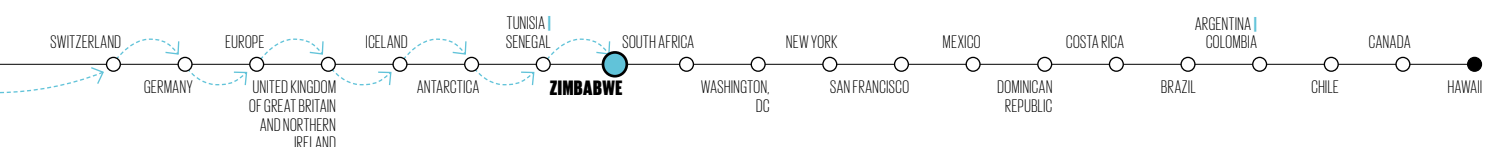
Partnering, Mercy & Trish are implementing closed, circular and green systems in Zimbabwe through waste mitigation technologies that are able to (re)integrate food waste and farm's remnants into the value-chain in the shape of biogas as well as organic fertilizer.

Moreover, a return to roots is taking place with indigenous crops such as rapoko (finger millet). This is good for people and the planet, as they are replacing foreign crop species.

These experiences demonstrate the resilience and the proactivity of Zimbabwean women, who want their voices and their needs to be heard by policy makers, even at the cost of going against their families and communities. Being bold and united towards the achievement of a better future through sustainable practices, women are the motor power of Zimbabwe.

> Being bold and united towards the achievement of a better future through sustainable practices, women are the motor power of Zimbabwe. <

> Accessing credit facilities represents a barrier for women, both in urban and rural areas. <

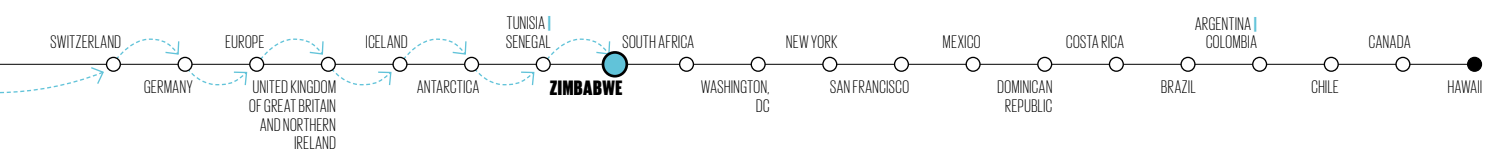


| Highlights |

- The inclusion of women in the agricultural sector is key to plugging the country's food supply gap and to achieving food security.
- The main challenges affecting women in agriculture in Zimbabwe are:
 - gender inequality;
 - need for investments;
 - lack of training programmes; and
 - lack of access to good nutrition.
- Reducing waste by re-generating new products should be the goal of every present-day farmer.

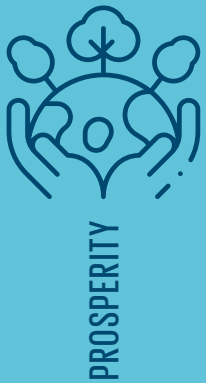


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SESSION SOUTH AFRICA

21.00 hours [GMT+2]



Developing countries are leading the future: approaches and best practices from Africa

- Angela Thoko Didiza • Inclusive strategies to cope with the age of disruptions
- Ikenna Nzewi • Releaf: industrialising food processing in Africa
- Samie Blasingame & Design Pillay • The voice of climate shapers: food vision

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



MODERATOR | Sara Roversi | Founder and president, FFI

The South African session covered the central role of developing countries in the transition towards sustainable food systems in a context where prosperity cannot be separated from sustainable management of natural resources anymore.

Measures regarding nature restoration and regeneration, and collaboration with institutions and the private sector to promote food security, were presented as an example of the South African endeavor towards a more efficient, equitable and sustainable food system.





Inclusive strategies to cope with the age of disruptions

Angela Thoko Didiza

Minister for Agriculture, Land Reform and Rural Development, South Africa

> Intensifying agricultural production, increasing agricultural investment, improving access to land are key priorities for my country in the agrifood system. <

“This event takes place at a time of extreme difficulties. Honest deliberations on how the current global food system can assure food supply to a growing population that is expected to reach 8.5 billion by the year 2050 are necessary.

The agricultural sector has remarkable resilience; in South Africa, after the protracted drought, agriculture grew by 13 percent in 2020.

Despite that, there were minor disruptions in the agricultural system. There were disruptions of markets, especially for smallholder farmers, imports and export flows, temporary increased demand and shortage of certain food products.

Thanks to partnerships with other sectors, these disruptions were resolved. The importance of public-private partnerships can therefore not be underestimated.

Intensifying agricultural production, increasing agricultural investment, improving access to land (expansion of farmland, which is critical to our strengthening) are key priorities for my country in the agrifood system; my department is accelerating land redistribution and restitution.

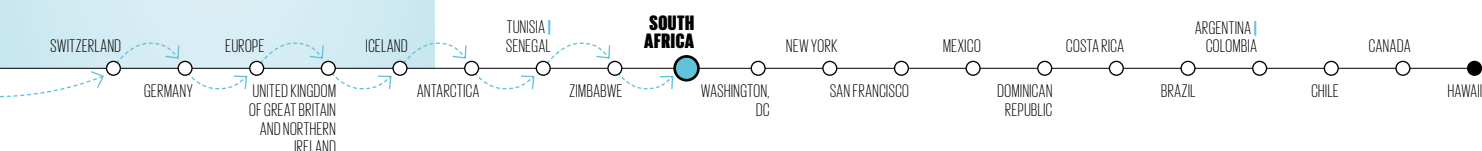
As for improving market access, we are pursuing programmes to assist farmer markets to be valued in the global value chain, linking South Africa to Japan, but also creating solidarity with other African countries on how we can improve the conditions of our smallholders farmers.

We are developing adapting strategies to cope with climate change and the challenge of water scarcity, which makes our land arid and semi-arid. Farming methods such as precision farming, climate-smart farming and urban agriculture are considered approaches to produce more with less in the country.

With the Land Care programme we will address the problem of alien plant species and reclaim the soil that has been degraded.

We work with farmers and support them to make sure that they increase the competitiveness of our export market by maintaining our disease-free status to stimulate confidence in most of our exporters' nations.

I'm sure we will be able to listen to each other's strategy and hold each other's hands in ensuring that, indeed, our agrifood systems remain sustainable.”





Ikenna Nzewi

CEO & co-founder,
Releaf

Releaf: Industrialising food processing in Africa

- In Africa, the food system is largely decentralized, with smallholder farmers responsible for most of the production. Logistics costs and challenges make it necessary to place technologies near farmers. Releaf operates a network of smart factories that add value to commodities in neighborhoods, which helps smallholders to be efficient and profitable.

Releaf is an agtech company that develops proprietary hardware and software solutions to drive the industrialisation of food processing in Africa. Our mission is to create Africa's decentralized food processing industry. Agricultural systems became too centralized in the past, and it doesn't work with Africa's style of agricultural production.

Starting in the oil palm sector – sustainable oil palm (an indigenous resource to West Africa) – where 80 percent of the oil comes from smallholder farmers, Releaf is creating technology to make farmers and food factories efficient. These smallholders have trouble achieving productivity that we see in other parts of the world: they have slow levels of production, use outdated methods, battle post-harvest losses and need to sell their crops to aggregators to pay their bills. This makes the entire process inefficient.

Releaf's technology makes it possible to source and process crops at scale. We develop hardware and software solutions to process these commodities so farmers can save time and make more money.

"Kraken," Releaf's proprietary and patent-pending hardware solution, is Africa's leading nut de-sheller, which allows workers to deliver a high level of quality output in the shortest time.

> Our mission is to create Africa's decentralized food processing industry. Agricultural systems became too centralized in the past, and it doesn't work with Africa's style of agricultural production. <

Beyond the hardware, Releaf developed a software to localize raw material in the market and to text farmers to let them know the price that we're buying at. Then, sourcing officers come to those farmers, purchase raw materials and provide access to finance.

Multinationals can partner with Releaf to unlock 80 percent of supply in Nigeria, projected to be the third most populous nation in the world in 2050.



The voice of Climate Shapers: food vision

**Samie
Blasingame
and Desigan
Pillay**

Food & Climate Shapers

- During the digital boot camp the “food vision” team had to address this challenge: “How might we strengthen consumer’s connection to their climate impact?”
-

It is known that many people don’t have an understanding of the impact of climate change but, even if they did, they still wouldn’t have this sense of connection with food. People are overwhelmed by the dimensions of the problem.

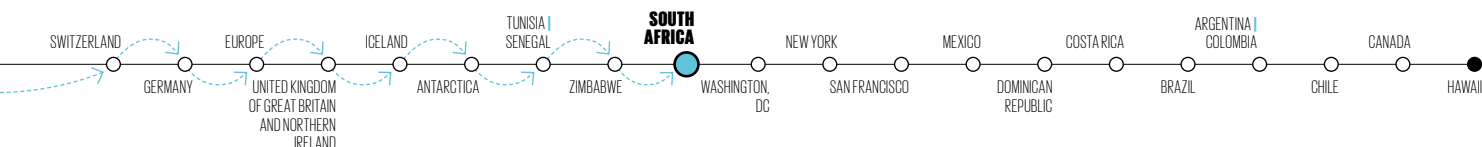
Our team wanted to connect with those kind of “passive” consumers and make them understand that they could make a concrete change.

We thought about a competition reality-type show able to make people understand the value of individual actions while entertaining them.

Participants build a community and choose a topic within the umbrella of food and climate, working on an idea that could be scaled, also taking advantage of local experts. Once the winning idea has been selected, the prize is used to implement the idea and scale it first at community level, then at city level, then at country level. In this process, the audience is engaged and inspired, actually co-creating a virtuous cycle of massive change.

Taking those significant topics to the broader audience is crucial since we need everyone to understand the complexity of our food ecosystem and how much every decision related to food has its value on the overall issue.

> Many people don’t have an understanding of the impact of climate change but, even if they did, they still wouldn’t have this sense of connection with food. <



| Highlights |

- Intensifying agricultural production, increasing agricultural investment and improving access to land are key priorities for the South Africa agrifood system.
- Realeaf is industrializing food processing in Africa by empowering farmers through technology, as well as building seamless workflows to factories through technology in order to tackle the decentralization of the African supply.
- Climate change is real and happening. The solutions will not come only from conference rooms full of scientists, big corporations and government officials. Everyone has a role to play in the fight and individuals must be the change.





VIDEO CONTRIBUTIONS

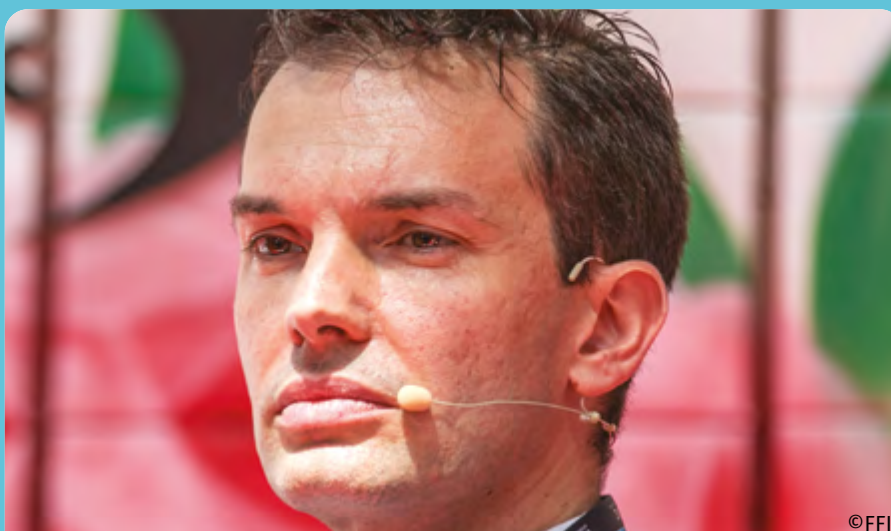
Cristiano Spadoni

Business strategy manager, Image Line



CLIMATE-SMART
ECOSYSTEM

Digital farming as a new literacy for the agroecology of the future



©FFI

There is a crucial role in data for the future of farming, to make the activity more sustainable and, at the same time, produce the amount of crops the world needs to be fed. Image Line contributes to this process through the development of softwares, cloud applications (such as QdC® – Quaderno di Campagna®) and databases for agriculture, as well as educational programmes in digital farming and a magazines dedicated to agro-innovation.

As far as education is concerned, AgrolInnovation EDU is a project aimed to share information concerning new technologies and to develop them through dissemination, with the participation of academics and students. **It is essential to expand knowledge about the importance of data in agriculture, and how to use it to collect information to produce better decisions.**

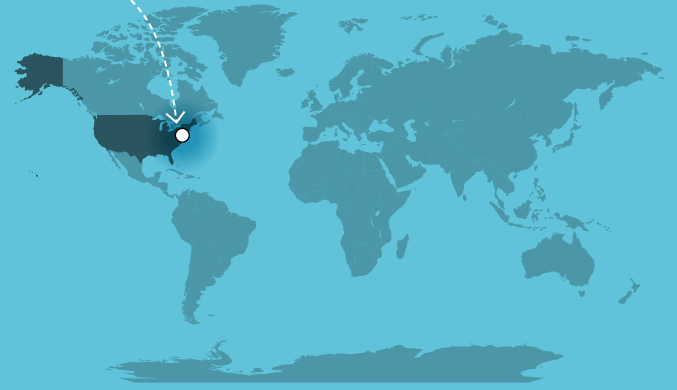
More than 91 000 growers are part of Image Line's community, and thousands use its farm management information systems. It will be more and more important to switch from "precision farming" to "decision farming," that means enabling farmers to produce more with less resources, achieving more sustainable ways of growing: a new "data-driven" agriculture.

SESSION UNITED STATES OF AMERICA

19.20 hours [GMT+2]

13.20 hours [GMT-4]

WASHINGTON, DC



FOOD DIPLOMACY

Tackling the climate crisis with a cooperative effort and awareness

Vaughan Turekian

Beyond sectorialization: integrating natural and social sciences

Abby Fammartino

FEED 4 Future: an SDG-aligned restaurant certification and guide

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



MODERATOR | Sara Roversi | Founder and president, FFI

The need for cooperation was the key topic of this session. As science and technology advance thanks to the joint actions of academies and organizations from all over the world, help from social sciences and policy makers is needed to implement these findings into the existing food system to make steps towards a more sustainable future. This session also presented an ambitious business idea developed by four Food & Climate Shapers to answer the challenge that restaurants face in balancing environmental sustainability and economic viability.





Vaughan Turekian

Policy and Global Affairs
Division executive
director, US National
Academy of Sciences

Beyond sectorialization: integrating natural and social sciences

> What we also need is a better connectivity between the social sciences and natural sciences; we need to look at the fact that while there is a lot of innovation, this will be put to use only if there is connection between disciplines. <

Earth Day started in the United States of America 51 years ago as a response to a lot of concerns about environmental degradation. Today, while this event is airing, we are seeing a lot of political, scientific, non-governmental research activities coming together to solve some of the great societal challenges around the environment and climate change.

The National Academy of Sciences was created by Abraham Lincoln as a way to advise the government on issues of science, engineering and medicine. Lincoln was a committed person to seeing increasing amounts of investment in food and agriculture.

We worked with many other academies around the world to think about issues around food and food systems: in August, a group of scientists coming from different parts of the world started to think about major climate-smart food systems.

One of the outcomes was that limiting agriculture GHG emissions will not be sufficient to address food systems, and that the approach should head towards more robust interventions such as developing incentives for consumers to change diets and, more generally, changing ways we think about diet. Policymakers have a role in this: in educating about the implications of food choices.

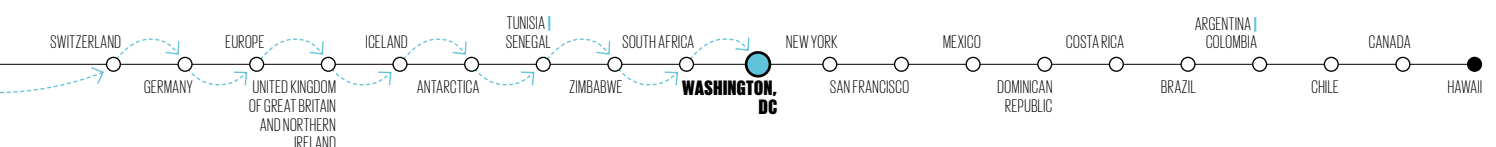
What we also need is a better connectivity between the social sciences and natural sciences; we need to look at the fact that while there is a lot of innovation, this will be put to use only if there is connection between disciplines.

Life science and basic research should work closely with social sciences and the policy research community in order to move something forward.

Similarly, we can't deal with the food system by looking at one country or one region. The food system is so wholly integrated, and the use of resources is wholly integrated. This requires a robust discussion with so many parts of the ecosystem (science, technology, food producers, the place where food is purchased) to understand how to move forward.

It isn't possible to isolate only one part of it and try to solve it.

The soy movement is also the water movement for the water that irrigated that soy, and therefore integrated knowledge is necessary to address our current multiple challenges and foster collective action.





Abby Fammartino

Food & Climate Shaper;
senior researcher, FFI

FEED 4 Future: an SDG-aligned restaurant certification and guide

- Developed by a globally dispersed team of four during an FFI and FAO 48-hour hackathon, FEED 4 Future is a business solution that promotes sustainability holistically, using restaurants as the central point of community connection and action.

In charge of tackling the problem of enabling chef owners to increase demand for sustainable restaurants while achieving a triple bottom line business, the team analysed the challenge that restaurants face in balancing environmental sustainability and economic viability

The market for viable sustainable restaurants has historically been limited to high-end restaurants that reach a narrow range of customers, yet restaurants are places where consumers spend the majority of their food dollars out of home.

Three key influencer groups participating and enabling the restaurant industry were identified:

- **consumers** – statistical evidence indicates that Gen Y and Z form the 66 percent of the current customer base, and they are willing to pay more to support sustainable business;
- **restaurants** – tight profit margins and high rates of food waste are limiting profits for most restaurants and sustainability is perceived as a cost rather than an opportunity;
- **food producers and suppliers** – farmers are facing many challenges to carve out a sustainable livelihood and restaurants can represent their solution for a diversified, fair income stream.

> FEED 4 Future promotes four SDGs related to the food, environment, education and development areas: restaurants can reduce community hunger and improve food consumption and production habits while building sustainable urban and rural communities through their sourcing investments and their employee education efforts, which need to be clearly communicated. <

FEED 4 Future promotes four SDGs related to the food, environment, education and development areas: restaurants can reduce community hunger and improve food consumption and production habits while building sustainable urban and rural communities through their sourcing investments and their employee education efforts, which need to be clearly communicated.

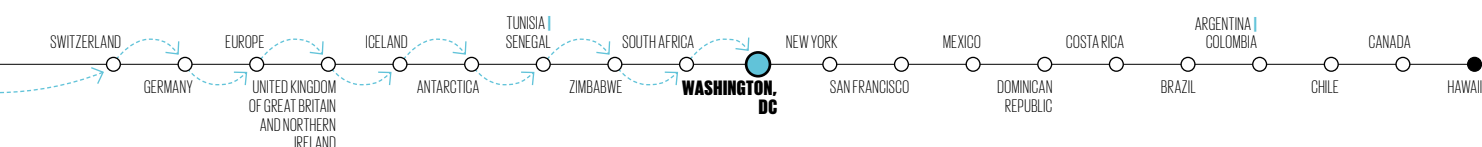
In practice, FEED 4 Future is a sustainable restaurant certification and marketplace with a TripAdvisor-like restaurant guide that is accessible to the public. Independent restaurants become certified by FEED, are placed on a map and are connected to suppliers and consumers, helping them become more profitable and sustainable.

Highlights

- An interdisciplinary and cooperative approach is necessary to tackle the climate crisis as it involves so many aspects and so many different actors, which could cooperate to achieve fast, fair and satisfying results.
- FEED 4 FUTURE is a restaurant certification system and platform where independent restaurants, customers and suppliers are connected in order to establish environmentally and economically sustainable resilient communities.
- FEED 4 FUTURE promotes four SDGs related to food, environment, education and development while tackling the problem of enabling chef owners to increase demand for sustainable restaurants while achieving a triple bottom line business.



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SESSION UNITED STATES OF AMERICA NEW YORK

01.15 hours [GM+2T]

19.15 hours [GMT-4]



CLIMATE SMART ECOSYSTEM

Food For Climate League: creating a new food and climate narrative

Eve Turow-Paul
Gesina Beckert

Panel discussion

MODERATOR | **Eve Turow-Paul** | Founder & executive director, Food For Climate League



MODERATOR | Eve Turow-Paul | Founder & executive director,
Food For Climate League

This session presented the meaningful work of an international, woman-led 501c3 research collaborative, Food For Climate League (FCL), analysing the food and climate challenges through the lenses of communication.

Language can shape behaviour.



PANEL DISCUSSION

Food For Climate League: creating a new food and climate narrative



Eve Turow-Paul

Founder & executive director, Food For Climate League

Food For Climate League is a 501c3 non-profit research collaborative working to create new food and climate narratives that reframe what climate-smart eating is, make it easy and alluring to partake in, and make these habits relevant to all people.

Too often, food and climate messaging is exclusive, inaccessible and culturally-irrelevant to the majority of the world's population. Without a change, climate-smart eating will never reach the global zeitgeist. That is why FCL is crafting new ways of talking about food and climate, with narratives that meet people where they are and makes climate-smart food culture relevant, accessible and enticing to eaters of all colours and backgrounds – and empowering those communities too often left out of the conversation.

We're in an unprecedented moment in human history; the global pandemic represents a "moment of disruption" where behaviour changes are more likely to happen. People want to regain a sense of autonomy, we're seeing the impact one person can make, and concern about climate has further risen over the last year.

Food For Climate League's 2019 narrative landscape research, sponsored by Food@Google, validated that talking about food and climate issues is uniquely challenging because:

- the agricultural and environmental concepts are complex;
- climate content can trigger difficult emotions from which people may want to escape; and
- talking about changes to one's personal food habits can be off-putting, given that food is a core part of our identity.

Moreover, some communications missteps are limiting the potential impact of a climate-smart food movement: there are so many wonderful, accessible and relevant ways to build a conversation around sustainability and there is not always a need to address climate issues directly.

In 2020, FCL conducted two research sprints. The first one, in collaboration with Sodexo's Future Food Collective, was focused on developing communications that would increase the purchase of agrobiodiverse menu items in the United States

> Too often, food and climate messaging is exclusive, inaccessible and culturally-irrelevant to the majority of the world's population. <



Gesina Beckert

Sustainability project lead, FFI



PANEL DISCUSSION

➤ There are so many wonderful, accessible and relevant ways to build a conversation around sustainability and there is not always a need to address climate issues directly. <

- of America. Based on qualitative needfinding interviews, three different communication directions were developed:

- ➔ traditional and time-tested, food that creates familiarity;
- ➔ health, food that heals people and the planet;
- ➔ simple and fun, food as an exciting experience.

These directions were applied to three different dish titles and descriptions.

The second sprint, sponsored by Food@Google, investigated what drives sustainable food choices and how iconography and language can change behaviour. This time, five communication directions were identified and applied to two dish prototypes:

- ➔ climate gamification (in order to help people understand the link between food and climate);
- ➔ origins (to connect a dish with the land or animal it came from);
- ➔ mood (to present food as a way to improve one's emotional state);
- ➔ health & tech (to emphasize the connection between food choice and immunity); and
- ➔ community (to cue relatedness and connectedness).

Prototypes from both research sprints were tested on the Datassential platform. Each dish was reviewed by approximately 300 American respondents, across various demographics. The answers to questions like "How likely are you to try this dish?" were analysed to identify how to best name and describe sustainable menu items for best adoption.

Five significant findings emerged from this research:

- ➔ language alone can shift purchase intent, driving people to choose (or not choose) climate-smart options;
- ➔ there is a concrete willingness to shift eating patterns beyond traditional meat-centred dishes;
- ➔ sustainable food communications need to adapt to different audiences who respond differently;
- ➔ the degree of an individual's connection to nature significantly impacts purchase intent of sustainable dishes; and
- ➔ emotional hungers, such as loneliness, affects food choices.

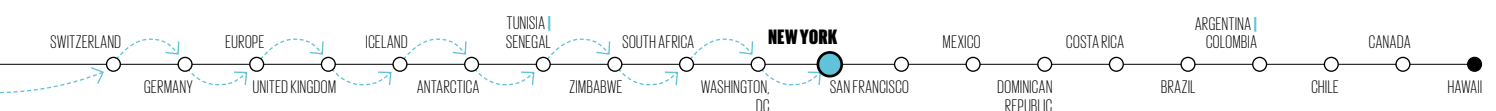
➤ The global pandemic represents a "moment of disruption" where behaviour changes are more likely to happen. <

Highlights

- We are in an unprecedented moment in human history, where there is a collective energy of global citizenship and a recognition of the healing power of nature: the time is now to spread new narratives about food and climate.
- The new narratives for climate-smart food options should take into consideration that: we can drive appeal and sales of sustainable food by shifting the way a dish is described; there is a willingness to shift eating patterns towards plant-based proteins; sustainable food communications need to change accordingly to audience and setting; relationship to nature is a significant indicator of sustainable purchase intent; meeting people where they are emotionally can make sustainable eating more relevant.



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SESSION **UNITED STATES OF AMERICA** SAN FRANCISCO

23.50 hours [GMT+2]

14.30 hours [GMT-7]



Part 1 ● Fighting food loss & waste: challenges and opportunities for the future

● MODERATOR | **Chiara Cecchini** | CEO & co-founder, Future Food Americas

Part 2 ● Earth regeneration and biophilia: the right way to design the future

● MODERATOR | **Tim West** | President, Sundial Foundation

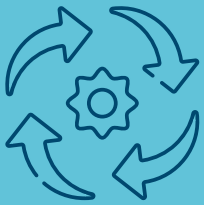
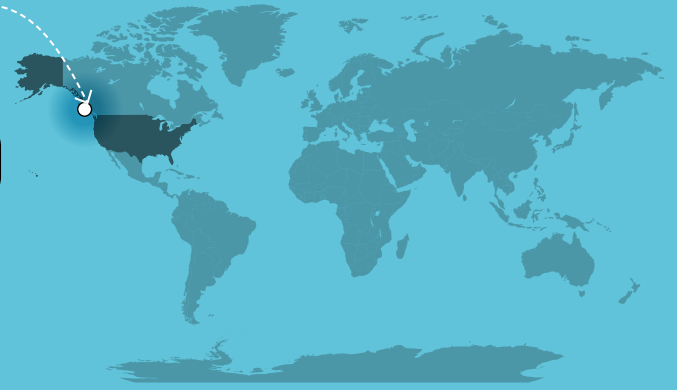


SESSION **SAN FRANCISCO**

PART 1

23.50 hours [GMT+2]

14.30 hours [GMT-7]



CIRCULAR LIVING

Fighting food loss & waste: challenges and opportunities for the future

Sheetal Bahirat
Steven Finn
Jonathan Deutsch

Panel discussion

MODERATOR | **Chiara Cecchini** | CEO & co-founder, Future Food Americas



This session focused on the topic of food waste and food loss - connected to SDGs number 2, 12 and 13 - by exploring the upcycled food strategy, which is currently gaining more and more attention worldwide.

PANEL DISCUSSION

Fighting food loss & waste: challenges and opportunities for the future



Sheetal Bahirat

Founder & CEO,
Hidden Gems Beverage



Steven Finn

Vice president,
Food Waste Prevention,
Leanpath



Jonathan Deutsch

President, Upcycled Food
Association; professor,
Drexel University

> As we have moved towards a culture of abundance, we became entrenched in a costly cycle of overproduction and excessive waste. <

Upcycling is the process of taking food that would otherwise be wasted and turning it into value-added products.

For hundreds of years, people have been capable of making sure that all of the edible parts of a product were used, yet as we have moved towards a culture of abundance, we became entrenched in a costly cycle of overproduction and excessive waste.

Ugly food and food scraps go directly to the bottom of the food recovery hierarchy – that is the landfill – even if they are perfectly edible or even the most nutritious part of the product (e.g. peels are extremely rich in phytonutrients and micronutrients). Thus, capturing that nutrition by keeping it out of the waste stream and within the supply chain is the goal of upcycling.

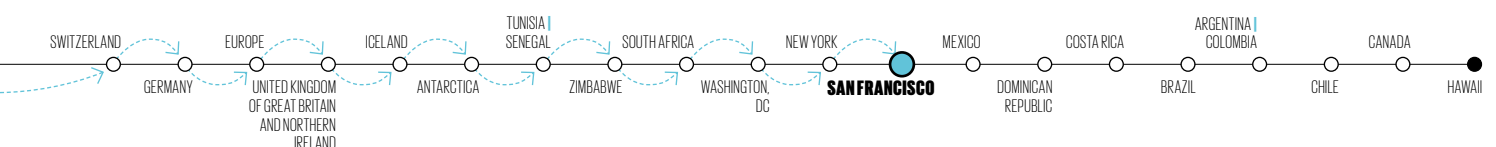
A few years ago, the food industry was skeptical about this topic due to concerns about consumers' feelings towards eating "repurposed" food and their willingness to pay for it. Conversely, extensive market research proved that, through education, consumers not only would have accepted upcycled food, but they even would also be open to paying a premium for products that are "better for the environment, better for you."

In the wake of these findings, ten companies got together in 2019 to start the Upcycled Food Association. One year later, over 160 members – both startups and multinationals – joined the cause, demonstrating that upcycling is not a passing fad nor a little corner of the food industry. It represents the future.

Among the change makers in action, a startup has revolutionized the conception of the avocado, America's most beloved – and controversial – fruit, by reintegrating it into a circular ecosystem. As a matter of fact, avocados are full of antioxidants that are being thrown away, given that about 95 percent of them are contained in the seed and the peel. This gap drove Hidden Gems Beverage to devise a way to extract the antioxidants from upcycled avocado seeds, while designing a catchy and healthy format for consumers and contributing to the local economy.

Helping major corporations of the food industry prevent

> Ugly food and food scraps go directly to the bottom of the food recovery hierarchy - that is the landfill - even if they are perfectly edible or even the most nutritious part of the product. <



PANEL DISCUSSION

> Extensive market research proved that, through education, consumers not only would have accepted upcycled food, but they even would also be open to paying a premium for products that are "better for the environment, better for you." <

- food waste through smart technology, LeanPath leverages actors who are able to impact food waste reduction globally, while educating and changing behaviours of employees and consumers worldwide.

Recognizing the lack of transparent measurement to establish a baseline level of food waste and assess progress against it, LeanPath provides companies with measurement-focused technology that tracks each transaction of food waste along the chain. It collects data in a cloud where organizations can analyse their performance with the aim of minimizing food waste in the short term and preventing it in the long term.

With the "finite pool of worry" that bottlenecks big organizations' decision making, it is crucial to bring out the concrete business sense of reducing food waste in terms of:

- food purchasing costs;
- labour costs;
- utilities costs; and
- disposal costs.

Additionally, prevention allows companies to:

- meet their climate and circularity goals;
- engage stakeholders; and
- establish their social responsibility publicly.

> Upcycling is not a passing fad nor a little corner of the food industry. It represents the future. <

Spreading the commitment across the supply chain means going beyond boards by empowering food service employees, who are on the front line, as well as involving consumers to make them aware of the key role they play in the challenge.

Besides the operational side, upcycling suffers from a framing issue, thus making it a "safe topic of conversation" would reshape people's behaviour towards it. Since a huge proportion of food waste happens at the home level, educating families to recognize the many lives and potentialities of the food they buy is urgent. Promoting mindful cooking, next to mindful eating, can lead consumers to look for upcycled foods but also think about their own daily practices.

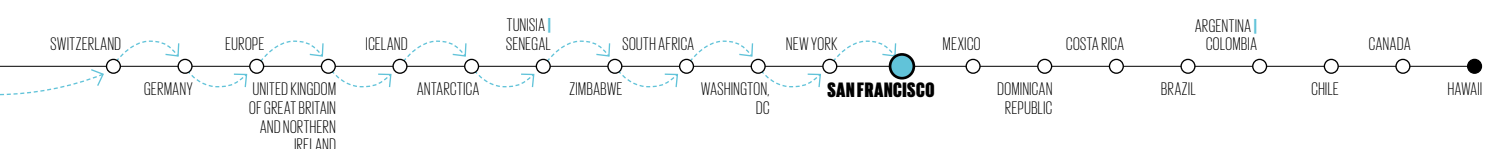
A certification for upcycled food products is also now available and recognizable as a logo on labels and packagings, representing a step forward for eco-conscious shopping.

Highlights

- Reducing food waste requires both an operational and a behavioural change in routes.
- There is great opportunity for food service organizations to address food waste at all levels of the hierarchy, thus they are being asked to step up and face the challenge with a holistic, impactful approach.
- Offering education, measurement technologies and linguistic legitimacy to upcycled food issues can fight the current culture of wasteful dependency.
- Upcycling doesn't solve food insecurity nor hunger, yet it can chip away at both problems just by keeping food out of the trash and in the supply chain. Moreover, using the most of the food that we buy gives dignity and meaning to the resources implied in its production, whether natural, human or financial.



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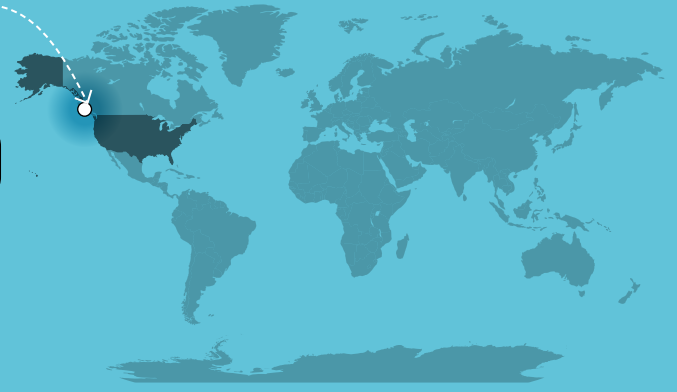


SESSION **SAN FRANCISCO**

PART 2

02.30 hours [GMT+2]

17.30 hours [GMT-7]



CLIMATE SMART ECOSYSTEM

Earth regeneration and biophilia: the right way to design the future

- Doniga Markegard • Lessons from the wilderness: mimicking nature to regenerate life
- Andrea Bariselli • Reconnect humans with nature through neuroscience
- Rob Trice • Leveraging data for agility in our food system

MODERATOR | **Tim West** | Slow Food chef, social entrepreneur & food futurist



Starting from the fact that the agriculture of the United States of America is a key enabling sector in the transition to a net zero economy, this session addressed the concept and practice of regenerative agriculture, the measurable effects of nature on human brains, as well as nature tech solutions rising from Silicon Valley that represent critical investment opportunities.



Doniga Markegard

Author of *"Dawn again: Tracking the wisdom of the wild"* and *"Wolf girl: Finding myself in the wild"*

Lessons from the wilderness: mimicking nature to regenerate life

- Regenerative ranching produces more biodiversity by mimicking nature's look, techniques and evolution. In a very disconnected world, tracking the wisdom of nature lets us relate with our inner self and really feel the connections among Mother Earth's creatures. Immersing in nature brings about curiosity for the unknown, for life. Curiosity leads to passion that, in turn, allows a greater vision of the role anyone can play in the larger ecology. Doniga Markegard learned about regenerative agriculture while observing the (inter)relationship between predator, prey and the environment.

The trophic cascade triggered by predators has dynamism at its core: When a predator enters an ecosystem, everything moves correspondingly and, in fact, the prey species and the surrounding plants thrive. There is no ecologically "intact" ecosystem devoid of animals, so there should be no agriculture system devoid of animals.

Getting to know each actor – from birds to moss – and the historic, indigenous ideal hidden within the environment hosting us is a prerequisite to practice regenerative agriculture and understand how everything relates in a symbiotic way. Only from that place of deep nature observation can we tend to our farms, ranches and the wild.

Markegard Family Grass-Fed ranch covers 11 000 acres of coastal grasslands, which has the extraordinary potential to:

- draw carbon down from the atmosphere;
- create more life; and
- produce more nutrient-dense food.

Living as a regenerative rancher means moving like nature does: moving herds of cattle, who in turn move the grasses, and those grasses move the soil, and consequently increasing biodiversity above and below ground. The healthier the soil, the healthier the food, and the more resilient the landscape. Converting industrial agriculture models to regenerative models is vital for the health of the planet and people.

> There is no ecologically "intact" ecosystem devoid of animals, so there should be no agriculture system devoid of animals. Getting to know each actor - from birds to moss - and the historic, indigenous ideal hidden within the environment hosting us is a prerequisite to practice regenerative agriculture and understand how everything relates in a symbiotic way. <



Andrea Bariselli

CEO & chief scientist,
Strobilo

Reconnect humans with nature through neuroscience

○ Biophilia is an ancient rooted instinct living inside of every human, and it reflects the deep yet mysterious connection between men and nature.

○ Fifteen years ago, Andrea Bariselli started to investigate the complex shades of this connection through portable encephalograms able to record – and decode – the most extraordinary thing that belongs to our species: emotions. Particularly, the extent to which nature benefits the human brain.

Groups of volunteers have been studied while immersed in different kinds of landscapes worldwide (i.e. in Italy, Kenya, Madagascar). The case of Madagascar is striking and tells the story of wild nature meeting man. While in the forest, the encephalograms volunteers wore recorded their brains through two indices:

- the cognitive load – their rational effort to understand the environment; and
- the engagement – their ability to feel at ease.

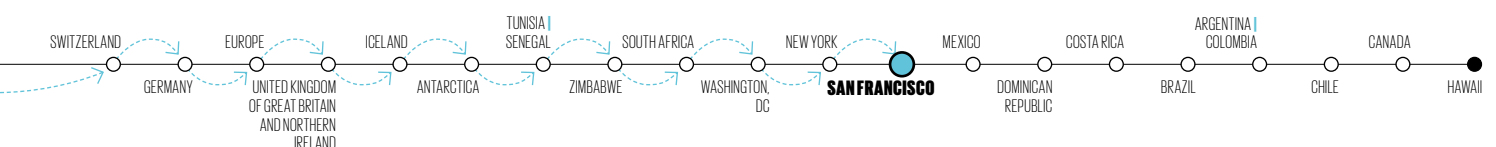
While the very first stage of the testers' journey recorded a cognitive overload, since the human brain is intrinsically set on fear and survival, just one hour later, it left the floor to engagement, with them starting to feel safe and thus able to enjoy the beauty of the surroundings. Hence, a sort of recognition of an ancient environment like the Malagasy forest by the human brains was somehow highlighted.

Strobilo believes in a new kind of intelligence called "naturalistic" intelligence – the capability to commune with nature. This intelligence can be educated and developed, yet in order to do so, people need to spend time in nature so they can nurture their curiosity.

Curiosity leads to knowledge that, in turn, leads to care and commitment towards something that deserves to be protected since it is directly connected to us – and actually it allows us to survive.

Exploring, quantifying and qualifying the benefits of nature on human brains through technology is imperative to collect solid and reliable data that can be used by decision makers at all levels.

> People need to spend time in nature so they can nurture their curiosity. Curiosity leads to knowledge that, in turn, leads to care and commitment towards something that deserves to be protected since it allows us to survive. <





Rob Trice

Founder,
Better Food Ventures

Leveraging data for agility in our food system

> Innovations in finance and technology can be applied to overcome barriers to the adoption of climate-smart agriculture practices to fulfill the mitigation, reduction and investment potential of the United States of America's agriculture sector at scale. <

- Food and agriculture represent 5-10 percent of the world's economy, yet they are as much essential as extremely challenged sectors. Four basic steps are required to properly face the threats of the current agrifood system:
- see the issues;
- see the solutions;
- solve the problems; and
- scale the solutions.

Today, Silicon Valley's IT innovation ecosystem has been embracing ag and food tech, while a flourishing constellation of entrepreneurs are moving towards nature tech solutions.

The Transformative Investment in Climate-Smart Agriculture report examined how innovations in finance and technology can be applied to overcome barriers to the adoption of climate-smart agriculture practices to fulfill the mitigation, reduction and investment potential of the United States of America's agriculture sector at scale. Particularly, six established practices were explored:

- reduced tillage with retained residues;
- cover crops;
- crop rotation;
- compost application;
- managed grazing; and
- integrated crop and livestock systems – all of which improve soil health, sequester carbon and produce numerous co-benefits such as reduced erosion, increased water infiltration, and economic and environmental resiliency.

More than 150 companies support digital data collection, analysis and sharing that can strengthen, accelerate and improve the collaboration among change makers in the United States of America. With technology and financial innovation targeted at specific practice adoption barriers, these benefits will accrue on the farm, throughout rural America and the agriculture value chain, and the nation as a whole.

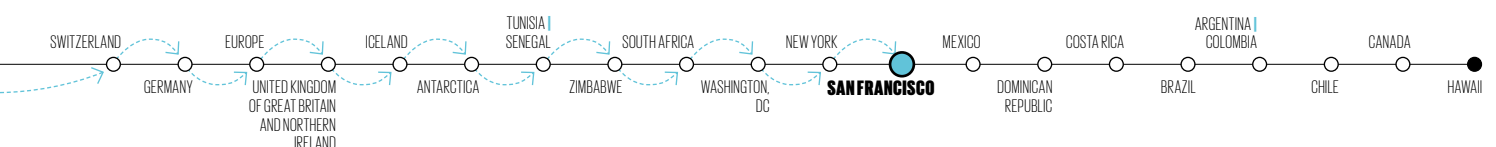
The national agriculture capital flow amounts to USD 972 billion per year, only 20 billion of which are allocated by the Government. Given the worldwide recognition of the value of climate-smart agricultural practices, directing more funds towards their implementation is necessary to support resiliency for the country's producers.

Highlights

- Moving as nature does is where the sweet spot of regenerative agriculture is.
- Regenerative agriculture is real and, if scaled, can make a difference.
- Humans are getting sick of the comforts they themselves created, and nature represents the therapy while technology is the medium through which we can quantify and understand the quality of different landscapes on the human brain.
- Although we are living in a very complex era, technology allows us to embrace this complexity. Strong investments in nature tech, as well as open-source datasets are required to enable, accelerate and scale up climate-smart agriculture practices among farmers and ranchers in the United States of America.



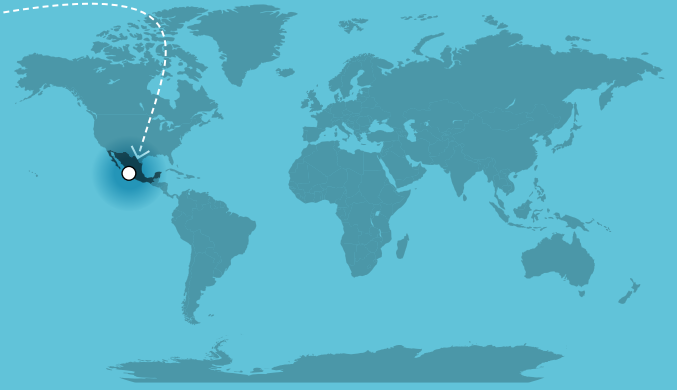
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SESSION MEXICO

03.45 hours [GMT+2]

20.45 hours [GMT-5]



CLIMATE SMART ECOSYSTEM

Food and sustainability: science and best practices from Mexico

Maria Ibba

The role of agricultural research for the development of food security

Sol Ortiz Garcia

Tools and strategies from the agricultural sector for sustainable food production

Victor Lopez
Saavedra

Sustainable agrifood systems: relationships and responsibilities

MODERATOR | **José de la Rosa** | Gastronomic scientist and R&D, Food Alchemist Lab, FFI



MODERATOR | José de la Rosa | Gastronomic scientist and R&D,
Food Alchemist Lab, FFI

This session demonstrated the effective commitment of Mexico in leading its agrifood system towards a more sustainable future, not only for the planet but for the people.

Specific strategies and measures involving multiple stakeholders have been developed and implemented in light of an integral approach.





Maria Ibba

Head, Wheat
Chemistry and
Quality Laboratory
(CIMMYT)

The role of agricultural research for the development of food security

- With 2 million people worldwide lacking micronutrients, one in nine people undernourished and one in three people obese, malnutrition causes 11 million premature deaths per year.

While the incidence of these conditions depends on local social and economic conditions, a global responsibility is to address the current agrifood system, which cannot provide safe, accessible and nutritious food for all. Additionally, agrifood systems are major contributors to greenhouse gas emissions (around 26 percent), the reduction of biodiversity and soil degradation.

Hence, a transformation of the sector is imperative and requires a holistic approach – from the production of the crops to the consumption of the final product – and efficient communication among all the different disciplines involved.

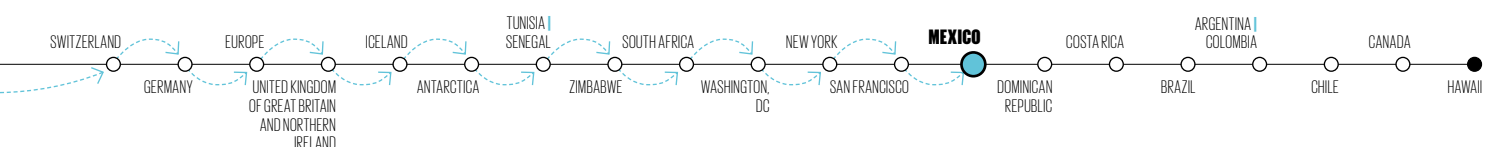
Within the transition process, agricultural research plays a pivotal role, starting from the improvement of crop productivity to ensure food security. This includes the work on quantity improvement (e.g. through the development of crops able to tackle future climatic conditions by combining the genetic diversity of modern and ancestral local varieties), as well as quality improvement (e.g. through the “biofortification” of staple crops in order to increase the content of essential micronutrients associated with malnutrition).

The Mexican International Maize and Wheat Improvement Center (CIMMYT) has been developing zinc, provitamin A and fibre “biofortified” wheat and maize to be distributed in South America, Africa and South Asia with the aim of providing a public health benefit.

Furthermore, research departments can:

- facilitate the adoption and the development of sustainable agronomic practices, especially in the context of resource-constrained conditions of the small farmers;
- reshape the traditional way of processing, manufacturing, storing and distributing food with a view to reduce food waste and loss; and
- secure the access to a varied and healthy diet among vulnerable groups in different food systems through technology.

> The CIMMYT has been developing zinc, provitamin A and fibre “biofortified” wheat and maize to be distributed in South America, Africa and South Asia with the aim of providing a public health benefit. <





Sol Ortiz García

General director
for Climate Change
Response in the
Agricultural Sector,
Ministry of Agriculture
and Rural Development,
Mexico

Tools and strategies from the agricultural sector for sustainable food

- The Mexican Sectoral Programme for agriculture and rural development has three main pillars – productivity, sustainability and inclusion – intended to underpin knowledge-based agriculture that must converge from the scientific and traditional perspective in order to strengthen the decision making process.

Among all the planning instruments addressed in the programme – which are strictly linked to the Nationally Determined Contribution (December, 2020) – implementing sustainable practices in the agriculture and fishing sectors (Priority Objective 3) appears to be crucial to contain the more and more eminent challenges posed by climate change.

Given the plurality of ecosystems and stakeholders involved, a collaborative, intersectorial and multidisciplinary mindset is recommended because of the unique cultural and environmental heterogeneity that Mexico is asked to cope with.

The four main strategies undertaken for participatory development and implementation of public policy instruments focused on biodiversity, sustainability, inclusivity and food security are the following:

- the National Strategy for the Conservation and Sustainable Use of Pollinators (ENCUSP), which is going to be implemented;
- the Strategic Plan for Climate Change for the Agricultural, Livestock, Aquaculture and Fishing sectors (PLECCA), which is in the development and implementation phase and also is aligned to the Special Program for Climate Change (PECC);
- the in-progress Multiyear Program of the Sectoral Committee for Genetic Resources; and
- the Strategy for the Conservation, Restoration, and Sustainable Management of the Soil and Water, which is in the diagnostic development phase.

Each and every strategy is featuring collaboration among different governmental actors, civil society organizations, scholars and private actors.

To conclude, an integral approach is needed for Mexico to be food self-sufficient and able to transit towards more sustainable production models, and this approach can arise from the intersection of environmental responsibility, social justice and equity, and economic viability.

> Given the plurality of ecosystems and stakeholders involved, a collaborative, intersectorial and multidisciplinary mindset is recommended because of the unique cultural and environmental heterogeneity that Mexico is asked to cope with. <



Victor Lopez Saavedra

Senior manager,
Partnerships & Access
to Markets (CIMMYT)

Sustainable agrifood systems: relationships and responsibilities

- Sustainability is a broad concept where economic, environmental and social elements are in constant dialogue with each other. Hence, it can assume different nuances within different organizations. Since there is no one single – or right – way of pursuing sustainability, any stakeholder should make informed choices considering the private, local and global consumption. As long as there are more and more sustainable food options, we are following the right direction.

Today fine-tuned technologies are available for achieving a more sustainable agriculture. Although “precision agriculture” has always been associated with large producers and complex technologies, a whole generation of new actors is working to export those methods to all scales. Furthermore, the central role of consumers in the regeneration of agricultural practices has been empowered during the last 10 years, and the single buyer has the power to push the demand in a green direction.

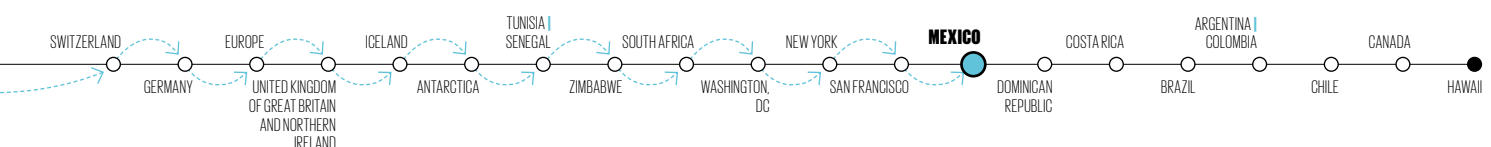
It has been demonstrated that the current overexploitation of resources is reaching its limit. A sustainable economy represents a compulsory transition that requires sincere cooperation among the “quadruple helix” involved:

- ➔ private sector;
- ➔ public sector;
- ➔ research institutes; and
- ➔ civil society organizations, respectively.

Whereas the private sector is responsible for transforming, in practice, the raw materials into products to be processed, the public one facilitates companies in complying with the rules of the game. Rules that, in turn, are affected by the findings of the research institutes and the choices – or votes – of the buyers and civil society.

Motivating the private sector in pursuing sustainability through constraints, rather than voluntary commitment is ineffective. Today, there are plenty of certifications of sustainability that populate the “pre-competitive space:” before starting price wars against competitors, companies may set socially and environmentally sustainable practices as their goals. In this way, we are solving (part of) the problem at the root.

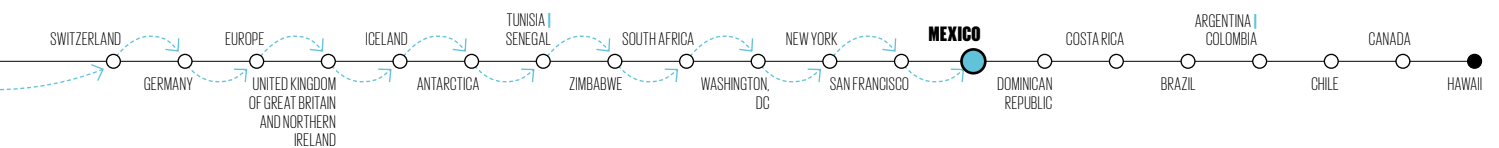
> A sustainable economy represents a compulsory transition that requires sincere cooperation among the “quadruple helix” involved: private sector, public sector, research institutes and civil society organizations. <



| Highlights |

- A multisectoral, multistakeholder, collaborative and integral approach is pivotal to face the transition towards a more sustainable Mexico, a highly heterogeneous ecosystem.
- The Mexican Sectoral Programme aims to make the country food self-sufficient and reach the SDGs set by the Paris Agreement through planning tools that are focused on biodiversity, sustainability, inclusion and food security.
- The commitment to change is not only up to institutions, but the private and public sectors, the research institutes and the civil society organizations – which are direct, powerful protagonists, in constant interrelation with each other.





SESSION DOMINICAN REPUBLIC

00.20 hours [GMT+2]

18.20 hours [GMT-4]



FOOD DIPLOMACY

Food and climate: voices from the Dominican Republic

H.E Mario Arvelo
Yolanda Leon
Berioska Morrison
Gonzalez

Panel discussion

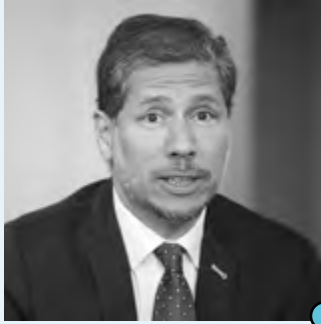
MODERATOR | **José De La Rosa** | Manager, Future Alchemist Lab



MODERATOR | **José De La Rosa** | Manager, Future Alchemist Lab

This session explored the current challenges faced by the tenth-most vulnerable country in the world to the impacts of climate change, the Dominican Republic. More sustainable and robust agrifood systems are needed and only cooperation at all levels can provide food security and nutrition for all.





H.E. Mario Arvelo

Ambassador, permanent representative, Permanent Mission of the Dominican Republic to the Rome-based United Nations agencies

PANEL DISCUSSION

Food and climate: voices from the Dominican Republic



Berioska Morrison Gonzalez

Alternate representative, Permanent Mission of the Dominican Republic to the Rome-based United Nations agencies



Yolanda Leon

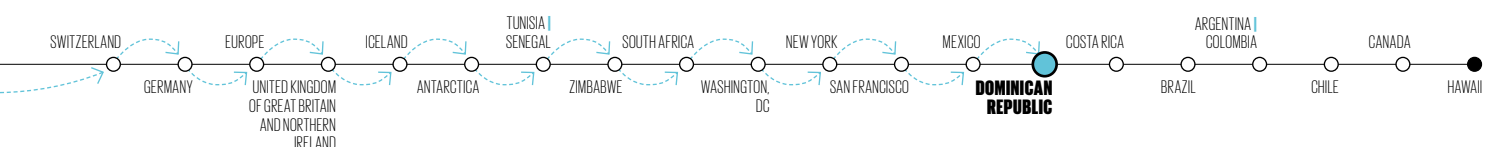
President, Grupo Jaragua

From an institutional point of view, the Dominican Republic is tackling climate-related issues through the actions of the National Council for Climate Change and Clean Development Mechanism, a multidisciplinary, inter-institutional entity enriched by economics, environment, industry, trade, agriculture, finance and development experts complying with many of the objectives set by COP 21. Among all the actions, it is important to emphasize the work-in-progress system for measurement, reporting and verification of CO₂. This is particularly relevant in the Dominican Republic, since foreign exchange depends mainly on the tourism and agriculture industry, which are both affected heavily by climate change. Local people rely heavily on agrifood production, yet they are not able to cope with the challenges they face on a daily basis.

Food security agencies, together with the government, are designing climate change mitigation and adaptation policies to reduce greenhouse gas emissions and remove carbon dioxide from the atmosphere through carbon sequestration. Although climate actions need strong and functioning institutions in order to be effective, fighting climate change at a personal level is central to society's ability to respond properly to the impacts of climate change. One drop at a time, every individual makes the difference.

The low levels of productivity and income from agricultural activity constitute a major challenge in terms of food security and improving the living conditions of the rural population. Recovering growth implies facing multiple challenges, among them:

- revising the sector's development model;
- improving working conditions;
- boosting productive development;
- reducing inequality;



PANEL DISCUSSION

> Food security agencies, together with the government, are designing climate change mitigation and adaptation policies to reduce greenhouse gas emissions and remove carbon dioxide from the atmosphere through carbon sequestration. <

- increasing resilience to climate change; and the
- capacity to respond to natural phenomena.

The time is now to react, and what the Dominican Republic is doing by participating actively across all the themes of the UN Food Systems Summit represents an excellent opportunity for a wide-ranging conversation about solutions to implement.

Climate change is collapsing food systems – and nearly 300 commitments from hundreds of thousands of people from around the world, and across all constituencies, are working to deliver progress on all 17 of the SDGs through a food systems approach. They are leveraging the interconnectedness of food systems to initiatives, as well as to resources around finance, governance, science and knowledge, innovation, technology and data, capacity and more.

Despite being confronted with a variety of obstacles, sustainable agriculture and livestock farming in the Dominican Republic is essential to its overall success. The Dominican Republic is experiencing increased temperatures, combined with decreased precipitation and sea level rise, leading to more drought which reduces crop yields and water supplies.

Accelerating evapotranspiration is dramatically impacting farmers, who are at risk of being left out of production if not provided with robust irrigation systems. Given the impossibility of growing, several villages in the southwest of the country are becoming empty, while some crops have been shifted to Hispaniola Island, where the higher elevation guarantees a variety of climates – yet they overwhelm the local water supply.

Moreover, climate change is disrupting the rainy season and farmers are no longer able to make calculations reliant on rain pattern, resulting in agricultural losses. The picture is further worsened by the damages caused cyclically by El Niño, especially to the country's northwestern people, who by losing their cattle they also lose their job.

In order to tackle all these challenges, the Dominican Republic needs to have all its actors designing collectively concrete solutions, while ensuring that economic growth goes hand in hand with environmental sustainability and social inclusiveness. The combination of hazards and vulnerability leads the country to significant climate risks and can jeopardize the achievement of national and sectoral development goals, including the reduction of rural poverty and inequality.

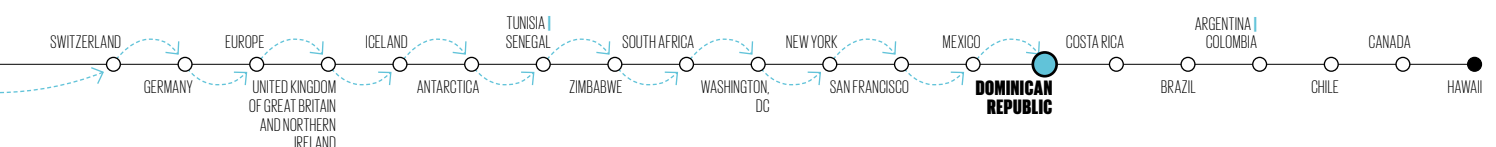
> The Dominican Republic needs to have all its actors designing collectively concrete solutions, while ensuring that economic growth goes hand in hand with environmental sustainability and social inclusiveness. <

| Highlights |

- The Dominican Republic is the tenth-most vulnerable country to the impacts of climate change, particularly extreme weather events. Thus, concrete, agile and effective actions are needed to foster green, low emission and climate-resilient development.
 - Revising the agrifood development model, improving working conditions and boosting productive development – while reducing inequality and increasing resilience – are the most urgent challenges the country needs to face.
- That is why the UN Food Systems Summit represents a great opportunity for the Dominican Republic to share ideas, insights and proposals with experts, civil societies and governments worldwide.



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SESSION COSTA RICA

02.45 hours [GMT+2]

18.45 hours [GMT-6]



CLIMATE SMART ECOSYSTEM

Earth regeneration: stories and best practices from Latin America PART 1

- Simona Maschi • Inspired by nature: designing the future
- Arturo Condo • EARTH University: regenerating education
- Denise Rotondo • How technology can support municipalities to reduce food loss and waste in Latin America

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



MODERATOR | Sara Roversi | Founder and president, FFI

This session reported on Costa Rica's effort in reshaping the education of the leaders of tomorrow, as well as in implementing policies able to accelerate the transition.

New balances are required, and design thinking, a holistic approach and transformative action are the way to establish them.





EARTH University: regenerating the education

Arturo Condo

President,
EARTH University

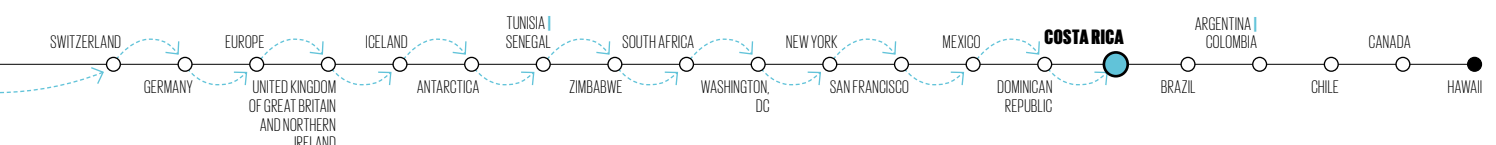
- During the Decade of Action, the whole educational system needs to be reshaped, starting from the subjects related to agrifood sciences.
- EARTH University in Costa Rica is focused on rural development, with agriculture – and thus, food production – at its core. Four main key points guide the university's approach:
 - ➔ experiential learning over traditional frontal lessons;
 - ➔ holistic view over silos – teaching agriculture encompasses a global perspective of people, planet and prosperity;
 - ➔ influence and diversity as tools to tackle the complexity; and
 - ➔ spreading the voice of the soil over political rhetoric.

EARTH University aims to fill the current gap by integrally training the leaders of tomorrow so that they can recognize how everything is interconnected and understand the ultimate meaning, while always referring to the ground, to their roots.

The nightmare brought by the pandemic made us rediscover and regenerate the value of “local” (crops and cuisine) and of “coalition” (private and public sectors, academia, NGOs).

New collaborations, especially among youth, are fundamental to take advantage of the awareness on many themes that have arisen during the COVID-19 pandemic: There are plenty of opportunities, yet people need to embrace them since they are not automatic.

> EARTH University aims to fill the current gap by integrally training the leaders of tomorrow so that they can recognize how everything is interconnected and understand the ultimate meaning, while always referring to the ground, to their roots. <





Simona Maschi

CEO & co-founder,
Copenhagen Institute
of Interaction Design
(CIID)

Inspired by nature: designing the future

- For a long time, designers have promoted a human-centred approach, yet nowadays, the more people's needs are pursued, the worse the impact is on the planet. Thus, new systems where both people and the planet are at the heart of the decision-making process are rising.

CIID in Costa Rica – a pioneer country concerning earth regeneration – aims to design sustainable solutions to be implemented worldwide. Merging a mélange of experts from design to biomimicry, the institute is working to include nature's dynamics into its processes: Nature is all about prototyping and failing to evolve.

With its international students in Costa Rica, CIID aims to explore the role of creativity and smart technology in building products and services that are environmentally, economically and socially sustainable.

New thinking methods are required by the disruptive era we are living in, and CIID attempts to apply design's toolkit and methods to food systems to ultimately benefit Earth.

Technology plays a crucial role in helping small farmers – which the economy of Costa Rica depends on – navigate the ever-changing context they live in. While artificial intelligence and machine learning let data be smarter, also permitting monitoring and predictions, CIID is promoting the Internet of Things, where ecosystems themselves – of farmers, products and communities – become more connected and intelligent.

New epiphanies happened and values have been rediscovered during the pandemic. In particular, the dichotomy between urban and rural contexts appeared clearly, highlighting the need for a new hybrid balance.

> Merging a mélange of experts from design to biomimicry, CIID in Costa Rica is working to include nature's dynamics into its processes: Nature is all about prototyping and failing to evolve. <



Denise Rotondo

Sustainability
advocate; member,
Bites of
Transfoodmation

How technology can support municipalities to reduce food loss and waste in Latin America

- Fourteen million people in Latin America and the Caribbean may have experienced severe food insecurity in 2021 due to COVID-19. It is estimated that 6 percent of global food losses occur in Latin America and the Caribbean, even though 47 million people still suffer from hunger.

Losses and waste impact the sustainability of food systems, reduce local and global food availability, create less profit for producers, raise prices for consumers and also have a negative effect on the environment. So, how can we ensure access to nutritious food in a way that meets individual nutrition and food security?

Denise Rotondo's research project focuses on understanding the role of technology to:

- 1) ensure access to safe and nutritious food for all; and
- 2) boost nature-positive production.

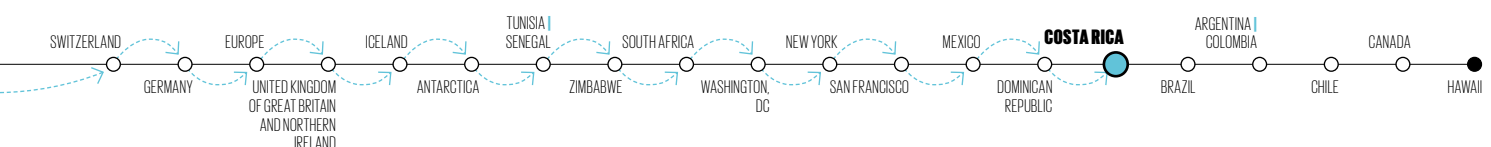
Due to this huge complexity, considering the future and understanding the real impacts on the current system is essential. For example, how are we going to keep cultivating crops in a future where water will no longer be as available as today?

These are scenarios and risks that food companies are trying to predict in order to define the future impact on their business. After conducting interviews within the World Food Bank Network in Latin America, Rotondo found that most food loss is coming from production and, by reducing only 10 percent of this loss, it will be possible to feed over 5 million people in Latin America.

In this scenario, technology assumes a key role in helping to identify the balance between increasing consumption and production for a healthier planet. Technology can be used to optimise resources, through precision agriculture, and to make better decisions, through the decision support system.

> Most food loss is coming from production and, by reducing only 10 percent of this loss, it will be possible to feed over 5 million people in Latin America. <

> Technology assumes a key role in helping to identify the balance between increasing consumption and production for a healthier planet. <



| Highlights |

- Everything is interconnected. Students, the leaders of tomorrow, need to have an integral view of the complex context they live in.
- Design tools and methods are needed to reframe the challenges of the future, by putting people and the planet at the center of the equation.
- Transformative action on protecting and restoring nature and the biodiversity of our planet is urgently needed. People have much more to gain from working with nature than against it.



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VIDEO CONTRIBUTIONS

Stefan Schmitz

Executive director, Crop Trust



CLIMATE-SMART
ECOSYSTEM

Protecting the unique value of biodiversity by preserving crop diversity



Whereas more than half of global GDP, USD 42 trillion, depends on high-functioning biodiversity, more than a fifth of countries worldwide are at risk from ecosystem collapse as biodiversity declines.

When talking about Crop Trust, some keywords arise: biodiversity - as crop diversity is our reason for being; food security - as the conservation of crop diversity allows it; forever- since our mission is to safeguard crop diversity to support food security for everyone, forever.

Crop Trust is laying the foundations for conserving crop diversity in perpetuity by raising an endowment that will support key collection of crop diversity in gene banks forever. Because when biodiversity is lost, it is lost forever.

Forty percent of plant species are currently facing extinction and this loss is as massive and irreversible.

Losing biodiversity means losing options, potentialities and solutions. Crop wild relatives might have the genes to help crops adapt to climate change or to new pests and diseases for new tastes, colors and textures.

The causes of biodiversity loss are complex and the threats are constantly evolving. A commitment to conservation is a commitment to action. In an environment that is inherently unpredictable, insecure and unsettled, Crop Trust keeps our thoughts on “forever”.

Biodiversity is priceless, yet our short-term world persists in squandering it. It is time to decide if we will continue to gamble with our future, or if we are willing to invest in it-because the actions we take today will last forever.

SESSION **BRAZIL**

00.40 hours [GMT+2]

19.40 hours [GMT-3]



FOOD IDENTITY

Social gastronomy: an Earth revolution movement

Nicola Gryczka Kirsch
Ivani Pauli
Teresa Corção
Saulo Jennings
Renata Cabrera
de Moraes

Panel discussion

MODERATOR | **Julia Dalmadi** | Director of Community Programs, FFI



MODERATOR | Julia Dalmadi | Director of Community Programs, FFI

This session addressed the complexity of Brazil as a huge country hit by inequalities yet blessed by a unique biodiversity.

Restoring connections among people and empathy with nature through food represents the keystone for future prosperity.



PANEL DISCUSSION

Social gastronomy: an Earth revolution movement



Nicola Gryczka Kirsch
Co-founder & orchestrator,
Social Gastronomy Movement



Ivani Pauli
Community
manager &
communications
strategist,
Pretaterra



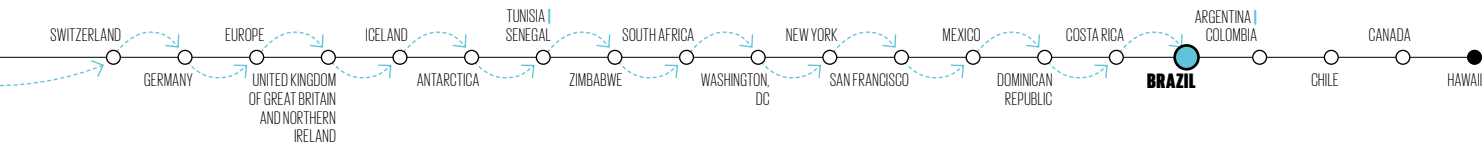
**Teresa
Corção**
President,
Instituto
Maniva



Saulo Jennings
Founder & chef,
Casa do Saulo



**Renata
Cabrera
de Moraes**
Municipal secretary
for Tourism and
Culture in Jarin



PANEL DISCUSSION

> Pilot programmes worldwide have demonstrated the advantages of polyculture systems in terms of health and profit, and Brazil seeks this change of course <

> Brazil suffers from a paradox: Though it is one of the most biodiverse countries on Earth, more than half of its population is food insecure. <

- Brazil suffers from a paradox: Though it is one of the most biodiverse countries on Earth, primarily thanks to the Amazon, more than half of its population is food insecure. We know that the world produces enough food to be able to feed everyone, thus, this dissonance is a matter of distribution, not production.

The Social Gastronomy Movement was born to fill that gap and weave the beautiful embroidery of Earth by connecting people. Indigenous People living in Manaus are going hungry, but they are not used to eating everything. Hence, a network of chefs was created to understand their dietary habits and needs for their spiritual and physical health.

Brazil has been severely affected by the COVID-19 pandemic. In a context where social connections have been reshaped drastically, Indigenous Peoples living in remote areas of the Amazon Forest represent a great example of adaptation, thanks to their ability to live and sustain themselves in harmony and empathy with nature, far from the industrialized world.

The role of governments in changing the food system is pivotal. It starts with educating children about traditions and (good) food culture, and continues through public policy. Climate shapers are asked to pressure politicians to turn their old-fashioned mindset into a conscious and proactive attitude, to join their forces in order to heal people and the planet and to make a difference in this way towards prosperity.

Since the Industrial Revolution, monoculture practices have been imposed on Brazil's agricultural system, resulting in impoverished soils that are undermining the local biodiversity and a relationship of dependence on European countries.

A diversification of crops is needed in order to produce biomass and increase the resilience of the soil and of farmers' livelihood. Pilot programmes worldwide have demonstrated the advantages of polyculture systems in terms of health and profit, and Brazil seeks this change of course.

> Indigenous Peoples living in remote areas of the Amazon Forest represent a great example of adaptation, thanks to their ability to live and sustain themselves in harmony and empathy with nature, far from the industrialized world. <

Brazil's food culture is incredibly rich and the work of chefs is crucial in bringing light to tradition through recipes. By the power of their strategic role within the food system, chefs can directly fight against ego-systems to restore eco-systems where food is not seen as a product but as nourishment. Local farmers should be part of the process, since they are the real ambassadors of the Brazilian diet and can support chefs in telling ancient stories through new dishes able to serve people in the respect of the planet.

In Brazil, people learned how to tackle the dualism between six months of drought and six months of wet season. Adapting is the answer, not only in nature but in urban areas. People are asked to respect what comes from the land and what comes from the sea, even if they live in the city. Despite being rich in pirarucu – one of the largest freshwater fish, native to the basin of the Amazon River – Saulo Jennings's fellow citizens do not eat it since it represents their source of income.

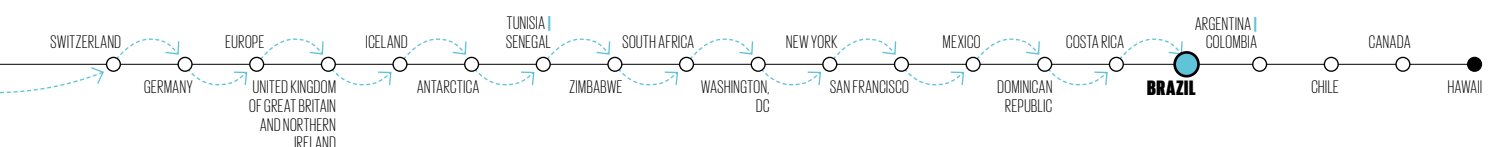
They make do with smaller fish. Living in the Amazon Forest is an everyday lesson in the preservation of biodiversity and of a lifestyle in harmony with nature.

Brazil is calling for a renaissance that needs to be triggered through education and experience. People need to experience the change in order to implement it and inspire others to join the mission.

There is always a ripple effect in our community life, and there is no action too small to count. Everything is connected: the microbiome in our gut and the bacteria in the soil. The first step towards consciousness is learning from the food we eat and its impact on the body and the planet: the two houses we live in.

> Chefs can directly fight against ego-systems to restore eco-systems where food is not seen as a product but as nourishment. <

> People are asked to respect what comes from the land and what comes from the sea, even if they live in the city. <

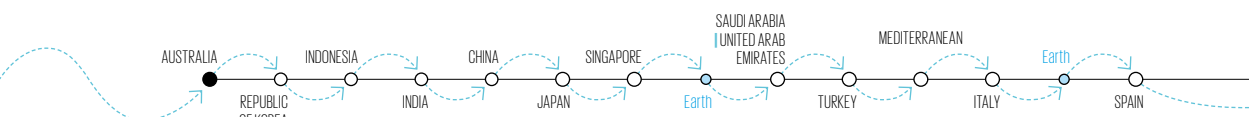


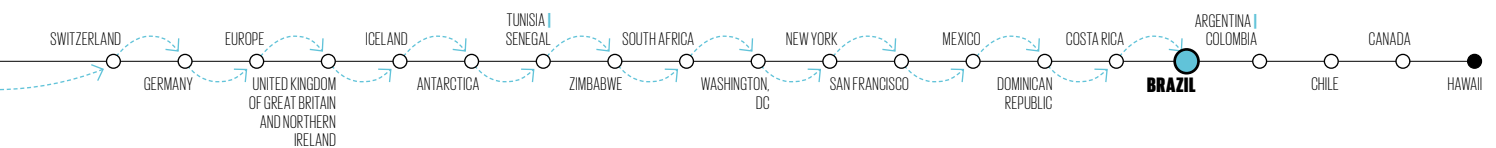
| Highlights |

- Food is not sustenance, rather it embodies culture, spirituality, identity and stories that we are asked to spread, protect and even innovate. But it always transmits the ancestral intelligence held by the country.
- Dismissed by monocultures, Brazil yearns for crop diversification in order to rebalance the soil and make local people empowered and independent.
- The adaptability, and respect, towards what surrounds us allowed human survival in the past and will do so in the future, when we are asked to align ourselves with the needs of the planet that hosts us.
- There is a need to educate through experience, instead of just talking. Acting and living the change, while understanding our role within it, can really impact old-fashioned perspectives and allow the cry of the Earth be heard by all.



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SESSION ARGENTINA AND COLOMBIA

03.15 hours [GMT+2]

22.15 hours [GMT-3 > Argentina]
20.15 hours [GMT-5 > Colombia]

CLIMATE SMART ECOSYSTEM

Earth regeneration: stories and best practices from Latin America PART 2

- Roberto J. Fernández • Challenges and opportunities for an ecological intensification of agriculture in Argentina
- Juan Camillo Restrepo Gomez • The path of Colombia towards integral rural development
- Paola Pollmeier • Food and nutritional education, food security, community resilience through food

MODERATOR | **José de la Rosa** | Gastronomic scientist and R&D, FFI



MODERATOR | José de la Rosa | Gastronomic scientist and R&D, FFI

During this session, the speakers talked about different actions that they are taking to improve sustainability and regeneration in their territories.

From governmental, academic, culinary or social points of view, these different activities demonstrate to us the broad spectrum of actions that can be done to promote change.





Roberto J. Fernández

Professor of ecology,
School of Agriculture-
IFEVA-Conicet,
University of Buenos
Aires

Challenges and opportunities for an ecological intensification of agriculture in Argentina

- Applying ecology to food production requires community participation and generation of wide agreements on land use (what, where, how, by whom), calling for institutional innovation that acknowledge power inequalities and include negotiated procedures, foreseeing frequent revisions.

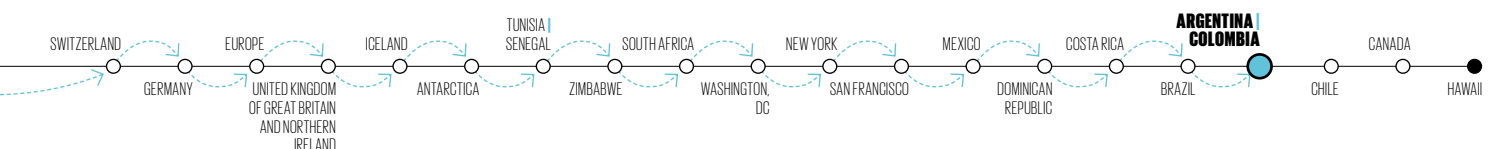
Innovation begins by political decisions and not only by technological developments, and it is the decision of how to act towards them that shapes the policies.

Appropriate technologies and innovations only become clear after these political issues are resolved, either explicitly or implicitly. National and provincial administrations have technological and institutional tools at their disposal that, if used to follow such social contracts, can then prompt desirable innovative actions by all actors along the chain. In the case of Argentina, the country has a long tradition of using process-based technologies (as opposed to those relying on external supplies) that allow the reduction of both costs and environmental impacts.

As citizens, we all can advocate for the cause of our choice. However, as scientists and academics, our role is not to tell society which ways of production and natural resource management to choose; those are value-laden decisions. Instead, we should strive to be honest brokers of policy alternatives: to broaden, not narrow, decision-makers' options for taking action, informed by stakeholder consultation and wide civic involvement.

Science can point to the existence of a problem, but usually cannot provide a unique guidance on what actions to actually take in specific circumstances.

> Innovation begins by political decisions and not only by technological developments, and it is the decision of how to act towards them that shapes the policies. <





The path of Colombia towards integral rural development

Juan Camillo Restrepo Gomez

Deputy minister,
Agriculture and Rural
Development

- International Earth Day is the proper moment to ratify the Colombian Government's decision, and also to keep working with FAO and other international entities that aim to achieve integral rural development.

But also today, 22 April, and after dealing with the COVID-19 pandemic, we have been able to prioritize two elements: guaranteeing food safety for everyone and understanding that rurality brings an economic reactivation element.

Food safety and economic reactivation are the way to comply with the UN SDGs for 2030.

It is in this way that we have made a commitment under our President Iván Duque Márquez's leadership. We agreed as a government to reduce our greenhouse gas emissions by 51 percent by 2030. We have also signed more than four zero deforestation pacts with our livestock bovine industries, milking actors, and palm oil and cocoa producers, amongst others.

We have also carried great advances into achieving certification of good practices and sustainable management for natural resources.

Lastly, during this week, the Colombian Government, under the Banco Agrario leadership, will be planting more than 100 000 new trees throughout the whole Colombian territory. The world, Colombia included, requires zero deforestation policies and better compliance towards all the SDGs.

> The Colombian Government prioritize two elements: guaranteeing food safety for everyone and understanding that rurality brings an economic reactivation element. Food safety and economic reactivation are the way to comply with the UN SDGs for 2030. <



Paola Pollmeier

Founder,
Platos Sin Fronteras

Food and nutritional education, food security, community resilience through food

- Platos Sin Fronteras is a non-governmental organization that addresses poverty and inequality through food and nutrition.
- During the pandemic, the organization started to implement the first-ever nutritional education lab in Medellín, in the neighborhood of Moravia, a vulnerable community located in the north of the city.

Thus, Platos Sin Fronteras developed a connection between the community of Moravia and different chefs from Medellín, seeking to teach the women from this community how to take advantage of Colombia's biodiversity when it comes to cooking.

The whole project started aiming to raise awareness on the nutritional value of food, while teaching people how to approach healthy ingredients that many times get wasted – only because people do not know how to prepare them. We started to notice that many people did not eat vegetables, for example, simply because they did not know how to cook them.

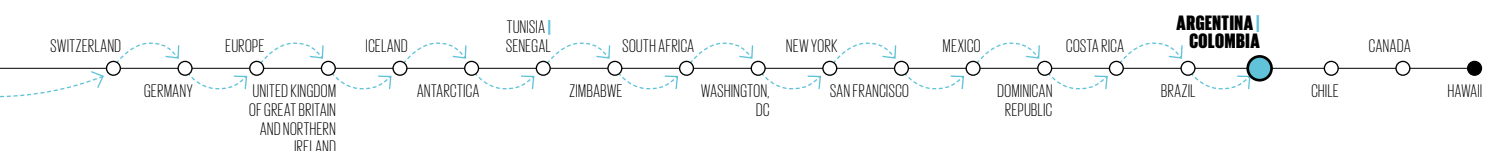
Hence, our goal is to bring the community closer to a more diverse and nutritious diet, promoting the benefits and uses of healthy ingredients such as vegetables and fruits.

Moreover, the organization has built important alliances with different local, national and international actors. On the one hand, it is important to highlight the alliance that the organization has developed with food banks from the city.

Thanks to this partnership, Platos Sin Fronteras is able to get different ingredients that can be used in the workshops with the communities. This dynamic also fights food waste, which is key to building a more sustainable Earth.

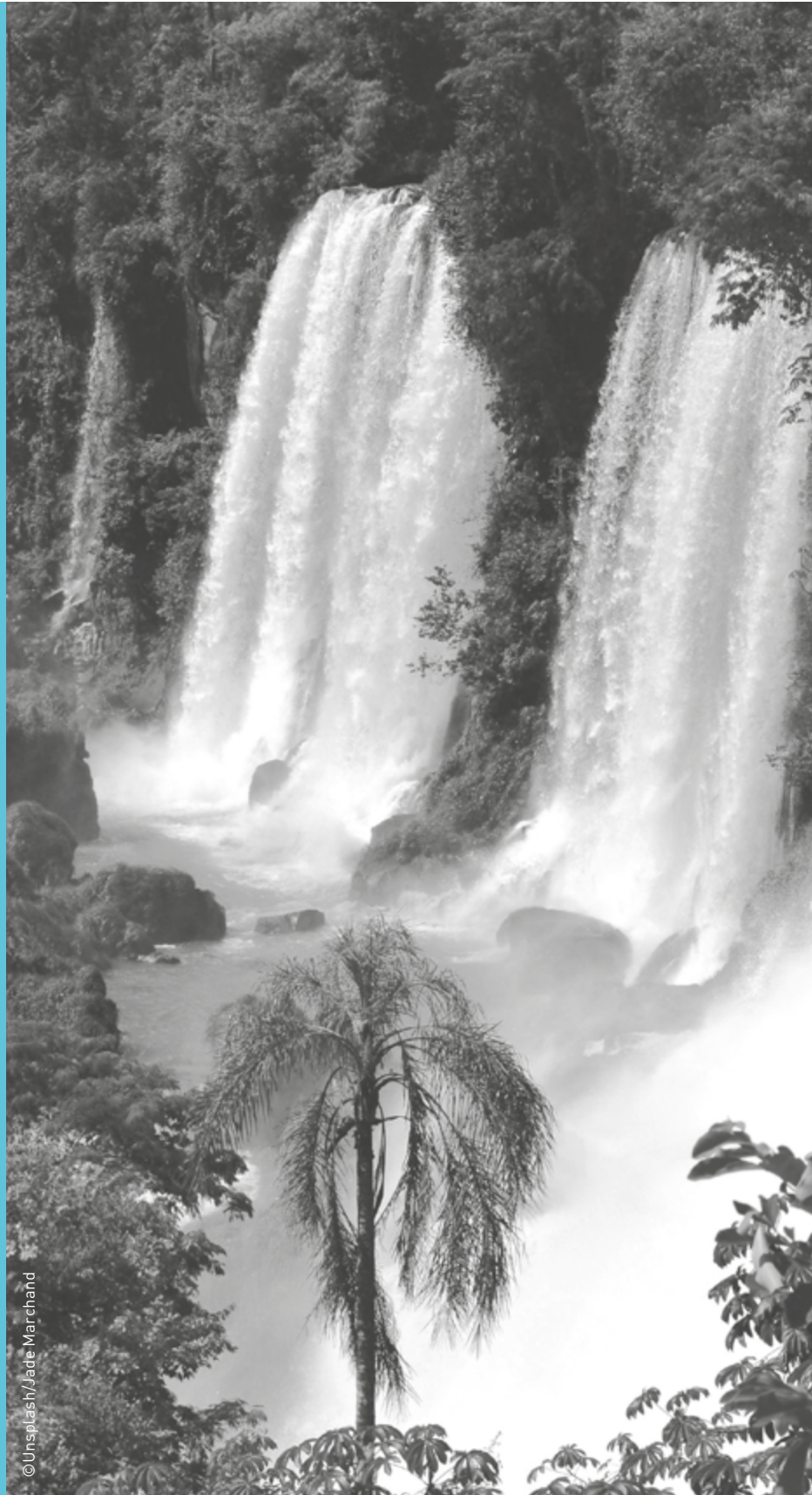
Platos Sin Fronteras has a great volunteering network, both at a national and an international level. Therefore, relying on people from different cultures, we have been able to open our minds and improve our work when it comes to changing the world one meal at a time.

> Our goal is to bring the community closer to a more diverse and nutritious diet, promoting the benefits and uses of healthy ingredients such as vegetables and fruits. <



| Highlights |

- Applying ecology to food production requires community participation and generation of wide agreements on land use, calling for institutional innovation that acknowledge power inequalities and include negotiated procedures, foreseeing frequent revisions.
- Good food begins with small-scale farmers working on the front line of our food systems. To achieve a global food system that produces enough nutritious food within planetary boundaries, it is crucial to support these vital men and women.
- With the COVID-19 pandemic, the Colombian Government prioritized two elements: guaranteeing food safety for everyone and understanding that rurality brings an economic reactivation element.



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VIDEO CONTRIBUTIONS

Father Joshtrom Isaac Kureethadam

Coordinator, Ecology Sector in the Vatican Dicastery
for Promoting Integral Human Development



FOOD IDENTITY

Spreading the ideal of eucharist to fight food insecurity



©FFI

They say the first city of humanity was Jericho, which was founded nearly 12 000 years ago when the interglacial epoch began. We had an ideal climate, the sea level was stable and agriculture was possible. In this situation, food security was possible, people began to settle down and there arose the great civilizations of humanity. Now, unfortunately, that security of climate and agriculture is threatened and, consequently, food security is threatened. We need to work to ensure full security for all.

I was always impressed that Jesus continued his presence amongst us by choosing the form of the eucharist, which is sitting and eating together. When we eat together, we form a community and *Laudato Si* speaks of Earth as our common home in which we live as one common family. We cannot permit so many millions of our brothers and sisters who are members of our common family to go to bed hungry.

“Without food security, without food for all, can we truly be a common family that lives together in our common home?”

SESSION **CHILE**

22.00 hours [GMT+2]

16.00 hours [GMT-4]



FOOD IDENTITY

How Indigenous Peoples protect Mother Earth: lessons from Chile

Brian Keane

Panel discussion

Mariam Wallet
AboubakrineRosa Cecilia
Baltazar Yucailla

Luisa Castaneda

Mariana Estrada

Alfredo Oropeza

MODERATOR | **Yon Fernandez-de-Larrinoa** | Head of Unit, Indigenous Peoples Unit, FAO



MODERATOR | Yon Fernandez-de-Larrinoa |

Head of Unit, Indigenous Peoples Unit, FAO

This session focused on the importance of the meaningful participation of Indigenous Peoples in the discussion on a more sustainable world.

This is an opportunity to learn from Indigenous Peoples to reflect jointly on how to transform food systems, the way we use our natural resources, how to protect biodiversity, and how to support Indigenous Peoples and promote culturally appropriate actions that respect their traditional knowledge, food systems, culture, territories, lands, resources and languages.



PANEL DISCUSSION

How Indigenous Peoples protect Mother Earth: lessons from Chile



Brian Keane

Chair of board of directors,
Land is Life; former rapporteur,
UNPFII



**Mariam Wallet
Aboubakrine**

Former chair, UNPFII



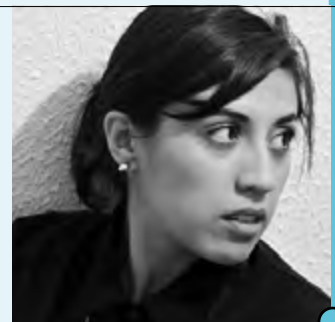
Luisa Castaneda

Specialist in Indigenous
Peoples' rights, FAO
Indigenous Peoples Unit



**Rosa Cecilia
Baltazar Yucailla**

Kichwa indigenous leader
from Ecuador; board
member, Land is Life



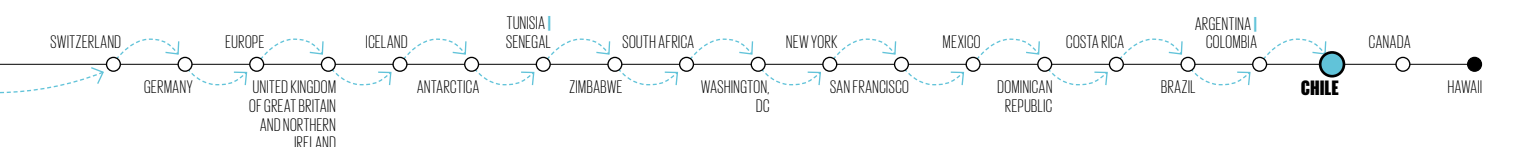
Mariana Estrada

Knowledge management
and gender specialist,
FAO Indigenous
Peoples Unit



Alfredo Oropeza

Mexican chef &
small-scale, sustainable
farming advocate



PANEL DISCUSSION

> There is double speech adopted by some states, accepting the recognition, protection and respect of Indigenous Peoples' rights, while claiming the social and economic relevance to extract natural resources mostly allocated within Indigenous Peoples' territories. <

- There are more than 476 million Indigenous Peoples living across 90 countries and speaking more than 4 000 of the world's remaining 6 700 languages. While occupying only 25 percent of the global land surface, Indigenous Peoples manage to protect 80 percent of the planet's remaining biodiversity.

They have adapted over generations to the ecosystems where they live, generating foods while also maintaining and enriching biodiversity thanks to their cosmogony, beliefs, governance, territorial management and traditional knowledge.

Indigenous Peoples generate food through fishing, hunting and gathering, and produce food through farming, aquaculture and livestock rearing.

Therefore, Indigenous Peoples' food systems are diverse and nutritious and provide best practices on resilience and sustainability, incorporating seasonality, food generation, a broad food base, adaptability, self-governance, collective-rights, ecosystems-conservation and territorial management, and they have demonstrated generational resilience to shocks.

However, the lack of recognition; marginalization; pressure from illegal logging, mining and extractive activities; COVID- 19 pandemic; and violence are pushing Indigenous Peoples into situations of vulnerability, poverty and malnutrition. Furthermore, they continue being excluded from policy and decision-making processes.

Indigenous Peoples are fundamental allies in climate change mitigation and the protection of biodiversity and natural resources. Their sustainable and resilient food systems, traditional knowledge and territorial management practices are genuinely game-changers that can change the world, making it a better place for humankind.

Although there are advances regarding the recognition of Indigenous Peoples, they face challenges that put their cultural and physical survival at risk. For instance, governments continue creating protected areas at the expense of Indigenous Peoples' lands, livelihoods and territories.

> While occupying only 25 percent of the global land surface, Indigenous Peoples manage to protect 80 percent of the planet's remaining biodiversity. <

> The lack of recognition; marginalization; pressure from illegal logging, mining and extractive activities; COVID-19 pandemic; and violence are pushing Indigenous Peoples into situations of vulnerability, poverty and malnutrition. <

This practice must stop, and, therefore, it is critical to integrate a human rights-based approach in laws, policies and projects and in the climate change agenda, including COP26 and the post-2020 Global Biodiversity Framework.

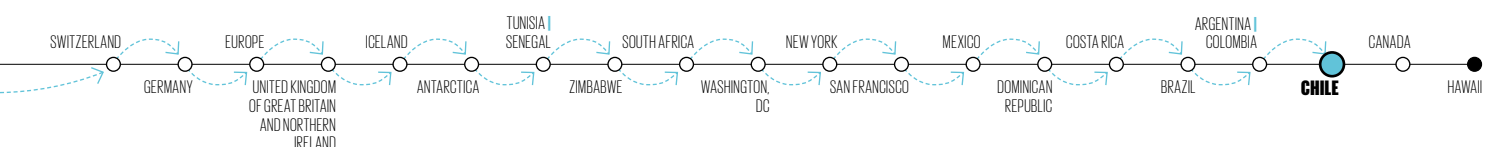
In some countries, a set of Indigenous Peoples' rights to lands and resources may be affirmed due to the endorsement or ratification of different international treaties and adoption of laws; yet, there is still lack of adequate and effective enforcement of the legislation, policies and international obligations, as many Indigenous Peoples continue facing obstacles to fully exercise their rights.

At the same time, there is double speech adopted by some states, accepting the recognition, protection and respect of Indigenous Peoples' rights, while claiming the social and economic relevance to extract natural resources mostly allocated within Indigenous Peoples' territories.

Unless the injustices against Indigenous Peoples stop and the development of a sustainable model of conservation improves, neither will the results for the Indigenous Peoples nor the planet be better.

Therefore, governments should start by recognizing and respecting the rights of Indigenous Peoples and work hand-in-hand with them as partners and learn from them, finding collective solutions to solve environmental issues that benefit humankind while respecting Indigenous Peoples ways of approaching life and nature.

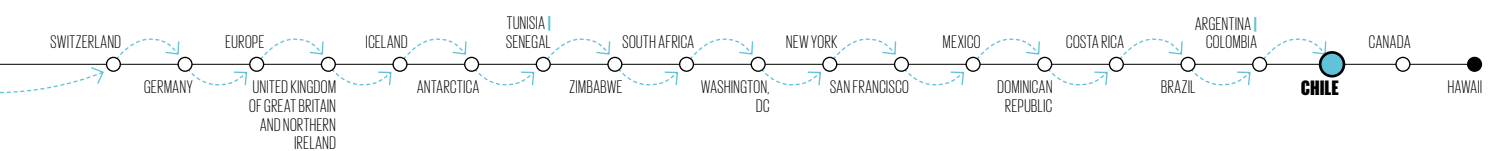
> Unless the injustices against Indigenous Peoples stop and the development of a sustainable model of conservation improves, neither will the results for the Indigenous Peoples nor the planet be better. <



| Highlights |

- Indigenous Peoples are well placed to contribute to and inform global, regional and national debates about food, sustainability, resilience and conservation. We need urgent, culturally appropriate actions to support Indigenous Peoples' food and knowledge systems and ensure their voices are included in policy and decision-making processes.
- Indigenous Peoples' food systems are among the most sustainable in the world, as per their high levels of self-sufficiency; efficient use of resources and renewable energies; seasonality and reciprocity principles that minimize food waste; and their adaptation capacity.
- In some countries, a set of Indigenous Peoples' rights to lands and resources may be affirmed due to the endorsement or ratification of different international treaties and adoption of laws; yet, there is still a lack of adequate and effective enforcement of the legislation and policies.
- Governments should work with Indigenous Peoples as partners and learn from them, finding collective solutions to solve environmental issues that benefit humankind while respecting Indigenous Peoples' ways of approaching life and nature.

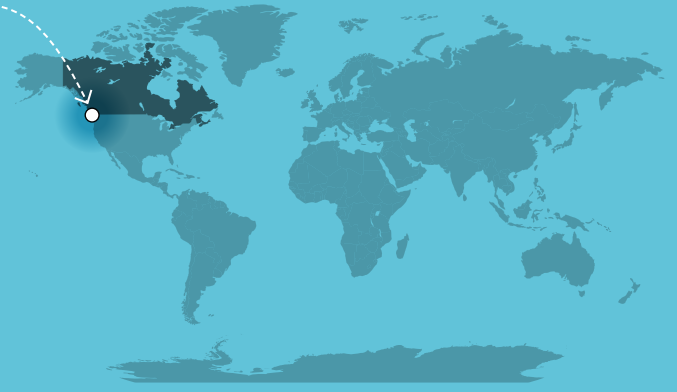




SESSION CANADA

04.15 hours [GMT+2]

22.15 hours [GMT-4]



Food justice and sustainability: voices from Canada

Marie-Noëlle
Desrochers

Canada's actions for present and future challenges

Eric Harr

Together for our common home: the implementation of an encyclical letter

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



MODERATOR | Sara Roversi | Founder and president, FFI

This session spread the mission of The Laudato Si' Challenge and deep-dived into Canada's approach towards the sustainable development of the agricultural sector.

It also discussed the improvement of food safety and nutrition through a food system approach, based on domestic policies and regulations, and a predictable rules-based system rooted in science-based regulations.





Canada's actions for present and future challenges

Marie-Noëlle Desrochers

Executive director,
Strategic Trade Policy
Division at Agriculture
and AgriFood Canada

> Having a predictable rules-based international trade rooted in science-based regulations is perceived as crucial to move food from areas of abundance to areas of scarcity, as well as to support diversification, innovation, production and economic growth. <

- A food systems approach enables more comprehensive support for women's empowerment, it addresses complex environmental challenges such as climate change and it supports economic growth.

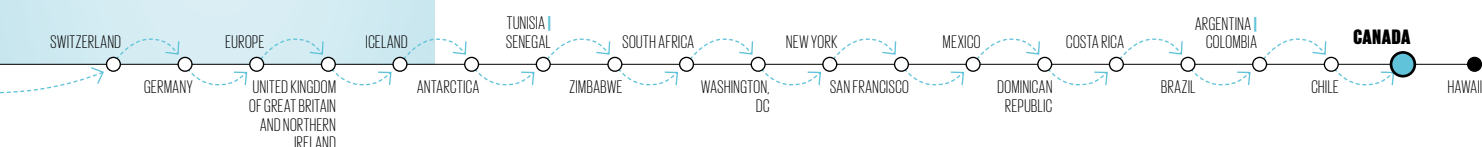
Canada's roadmap for a healthier food system is represented, on the domestic front, by the Food Policy launched on 17th June, 2019. It is focused on improving food-related health outcomes, promoting inclusive economic growth, strong indigenous food systems, sustainable food practices and vibrant communities.

Canada adopted a 2021 budget including CAD 140 million to help emergency hunger relief organizations, and CAD 200 million to accelerate emission reductions through the Agricultural Climate Solutions programme based on Living Labs, an expanded model of agriculture which has been endorsed by the G20 as a model of innovation and collaborative research.

Over the last years, Canada has also undertaken foundational work to study food waste, its causes, and the actions best suited to addressing the problem.

As a matter of fact, "Reduce Food Waste" represents one of the four near-term areas of action within the Food Policy. Having a predictable rules-based international trade rooted in science-based regulations is perceived as crucial to move food from areas of abundance to areas of scarcity, as well as to support diversification, innovation, production and economic growth. For this reason, Canada's efforts include a focus on strengthening the multilateral trading system and on addressing non-tariff barriers that hinder innovation, trade and investment.

On the international front, Canada's assistance supports climate change, climate-smart agriculture, gender transformative approaches in agriculture and the development of sustainable food systems to improve food security, reduce poverty and develop climate resilience in developing economies.





Eric Harr

Co-founder & CEO,
The Laudato Si Challenge

Together for our common home: the implementation of an encyclical letter

- We are one global human family and food represents a social justice issue. Taking up the global challenges of His Holiness Pope Francis' encyclical letter *Laudato Si: On Care for Our Common Home*, The Laudato Si Challenge answers the call of taking care of our common home by making bold movements towards creating a sustainable and resilient world that feeds human dignity without leaving anyone behind.

The challenge realizes the concept of integral ecology by implementing measurable, concrete and time-bound solutions. It empowers vulnerable people, and supports the vision of the Sustainable Development Goals set for the Agenda 2030.

The approach combines the precision and rigor of the venture philanthropy model with the focus of the "commitment model" to drive effective actions able to spread a regenerative mindset to heal the planet that we are borrowing from our children.

We have a moral imperative to leave this planet better than we found it, and the best way to do it is by supporting all the young entrepreneurs who want to design a better future with our intellectual, financial and spiritual capital.

We must connect leaders in the public, private and faith sectors to accelerate new and specific commitments to impact. Eric Harr's message to young people is to turn abstract talk into concrete walks, to involve the community of climate shapers to take advantage of the co-creation process and to not be afraid of asking for help and support.

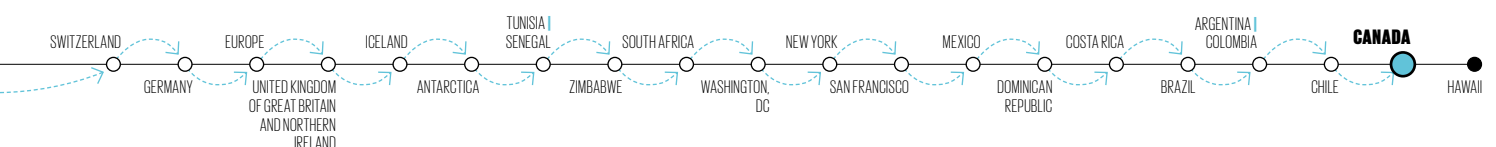
> We have a moral imperative to leave this planet better than we found it, and the best way to do it is by supporting all the young entrepreneurs who want to design a better future with our intellectual, financial and spiritual capital. <

Highlights

- Youth are the torchbearers of the 2030 Agenda, and their active engagement in sustainable development efforts is central to achieving resilient societies able to avert the worst threats and challenges to sustainable development.
- As the decade of action unfolds, Canada is committed to achieving the SDGs of the Agenda 2030 across all the three dimensions of sustainability: environmental, social and economic.
- Food security represents one of the most complex and important challenges that we are facing as a global community, and addressing this problem requires both extensive domestic policy intervention as well as strong international cooperation.



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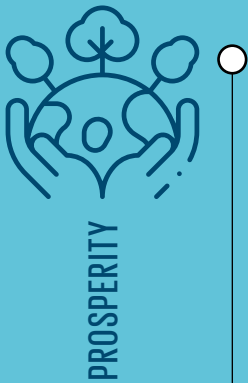
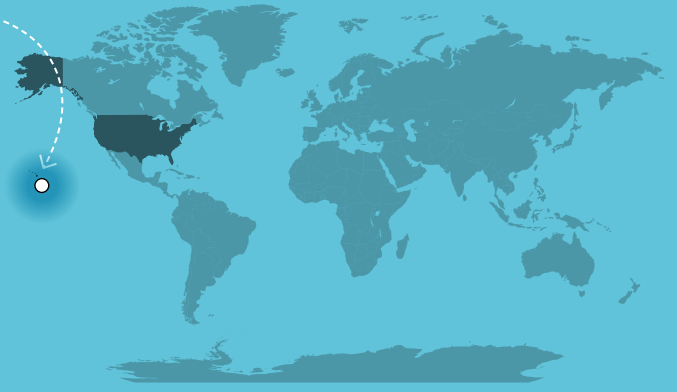
SESSION

04.30 hours [GMT+2]

19.30 hours [GMT-7]

UNITED STATES OF AMERICA

HAWAII



Values and diversity: the ingredients for a better future

Cardinal Peter K.A.
Turkson

An integral ecology for an integral society:
the great challenge for our time

Mark Brand

Food as a conduit to love: "A Better Life Foundation" model

Ramsay Taum

We are what we eat: a reciprocity agreement of ALOHA

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



MODERATOR | Sara Roversi | Founder and president, FFI

The very last session of the second Global marathon on Sustainability brought us to Hawaii, a land where the special relationship with Mother Earth is strongly felt, thanks to the concept of reciprocity, a core value of the native Hawaiian culture.





VIDEO CONTRIBUTIONS



PROSPERITY

Cardinal Peter K.A. Turkson

Prefect, Dicastery for Promoting Integral Human Development

An integral ecology for an integral society: the great challenge for our time



COVID-19 has made it starkly clear that our food distribution system is failing, and it reveals how the poor suffer from a food system that doesn't ensure food security all over the world. It is our duty to draw attention to three basic points to effectively turn this situation around.

First, we need to look at the whole food production system, from the farm to the table, and look for the great challenge of how to manage our waste so that even what needs to be thrown out can probably be reprocessed. For example, it has been discovered that the waste coming from the hop and the malt that is used in breweries is so rich in protein that it can easily be converted to flour.

Second, at the centre of this debate is the need to consider the vulnerable and suffering communities, the voiceless small-scale farmers, and find ways to support them and give them the tools to sustain their own communities. Sometimes, access to food is a question of right and it is our duty to enable people to realise that right, to ensure that nobody is left behind.

Thirdly, we need to develop and support sustainable models of production such as agroecology and improved traditional methods of food production. This has to go hand in hand with the availability of financial resources, as well as the political will of governments to support and to invest in proper food production for the well-being of their population.



Mark Brand

Founder,
A Better Life Foundation

Food as a conduit to love: “A Better Life Foundation” model

- Mark Brand believes everyone deserves to have access to nutritional food, made with love, that's not only nourishing for the body, but also designed intentionally to show someone the intrinsic truth: you matter, you are somebody's somebody, and there are people who want to keep you safe. His work is laced with community care and a deep understanding that when we feed one, we nourish ourselves.

Knowing well that hope unpaired with action leads to hopelessness, he

developed dozens of programmes that have resulted in over 3 million meals served to people living in some of the most challenging of economic, spiritual and often, physical, circumstances.

In union with A Better Life Foundation – the charity Mark founded in 2013 –, Mark's commissary kitchen partnered with a grocery store and a tricycle delivery company to rescue 16 million tons of food waste. They then turned this into delicious meals for people in need.



Ramsay Taum

Director,
Pacific Islands
Leadership Institute HPU

We are what we eat: a reciprocity agreement of ALOHA

- In Hawaii, the word “aloha” is a very special principle, not just a simple greeting but a way of living, a concept of reciprocity. It really speaks about the relationship that people have with the place we live and with one another.

And if there's any relationship that really locks us in and defines who we are, it is the food we eat: when we consume the food and the water of the place we live, that gives us the identity generations before us had, in a continuous relationship

between people and land. This is the reciprocity agreement: we take from our Earth and we must give ourselves back to her.

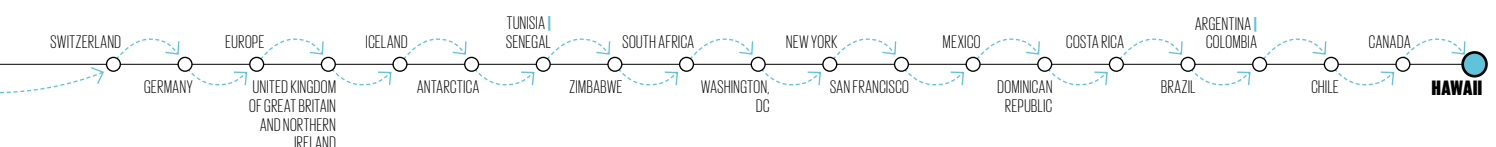
This perfectly reflects when we speak about food. We really are what we eat, and if we don't know where our nourishment comes from, then we don't really know who we are and what our identity is. We need to embrace this relationship, take care of Mother Earth and give back to her what we receive.

Highlights

- Reducing waste during each stage of the production and supply chain; empowering small producers and making them resilient; and driving investments towards the transition to regenerative farming are the main challenges we need to face.
- Cooking is an act of love for others and for ourselves, and the planet also deserves a role in this beneficial relationship.
- As opposed to Western individualism, the Hawaiian lifestyle philosophy sets reciprocity as its cornerstone. Growing, cooking and sharing food enables people to operationalise compassion towards the community, and to reconnect with the primary source of food: Mother Earth.



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REGENERATION

was the leitmotif of
the Future Food Institute and
FAO elearning Academy

**24-hour Global marathon
for Sustainability.** We crisscrossed
the globe to advocate for healthy food as
the deep, integral nexus between
People, Planet and Prosperity
and **THE URGE FOR UNITED
ACTIONS.**

**Let us join efforts and
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BEN YOUSSEF SAIMA → BENNETT ANTHONY → BENNETT ANTHONY → BIL DILEK
→ BJÖRN SIGURÐSSON INGI → BLASINGAME SAMIE → BRAND MARK →
BUTTU MARCO → CABRERA DE MORAIS RENATA → CASTANEDA LUISA → CECCHINI CHIARA
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→ DALMADI JULIA → DE LA ROSA JOSÉ → DEL RE EMANUELA → DEMAIO SANDRO →
DESROCHERS MARIE-NOËLLE → DEUTSCH JONATHAN → DHAUL VANDANA → DI MAIO LUIGI
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OUR DEEPEST APPRECIATION AND GRATITUDE TO ALL THOSE WHO CONTRIBUTED

FAMMARTINO ABBY → FAN SHENGGEN → FAQEEHA OSAMA → FAYE GORGUI → FELDMAN BEN
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ZAC → GRYCZKA KIRSCH NICOLA → GUERPILLON BARBARA → HAFSI SENDA → HAKIM SEMI →
HAKIM SEMI → HAMID RABIH → HAMZE MOHAMAD → HARRERIC → IBBAMARIA → IGLEZOU VICKY
→ JACOSTE BEATRIZ → JENNINGS SAULO → JEON JONG-ROK → KANDIERO BRENDA →
KATILI NIODE AMANDA → KEANE BRIAN → KENNEDY BROWN EVERETT → KENNETT LANA
→ KIMPILJOO → KRAUSE CHRIS → KUREETH ADAM → FATHER JOSHTROM ISAAC → LABIDI ARBIA →
LARICCHIA CLAUDIA → LEE SANGHYUN → LEON YOLANDA → LIPARI MARINA
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MASSARISONIA → MASTROJENIGRAMMENOS → MAZZETTI ANGELO → MONTEFUSCOMASSIMILIANO
→ MORO ELISABETTA → MORRISON GONZALEZ BERIOSKA → MURTHY ANUSHA →
NAKAMURA MOMOKO → NDIAYE FARA → NEWNHAM PAUL → NYARKO DENNIS
→ NZEWI IKENNA → OLAFSSON GUNNAR → ÓLAFSSON GUNNAR → OOMEN ANISHA
→ OROPEZA ALFREDO → ORTIZ GARCÍA SOL → OUERTANI EMNA → PARENTI ANTONIO
→ PATIL SHEETAL → PATUANELLI STEFANO → PAULI IVANI → PETRACCHI CRISTINA →
PILLAY DESIGAN → PISANI STEFANO → POLLMEIER PAOLA → POLMAN KIM → RESTREPO
JUAN LUCAS → RESTREPO GOMEZ JUAN CAMILLO → REYZA RAMADHAN MOHAMAD →
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SPADONI CRISTIANO → SULISTYAWATI EVA → T HAKATA TRISH → TADDEI FRANÇOIS
→ TANYA AYSHA → TAUM RAMSAY → THAI LIM KOK → THOKO DIDIZA ANGELA →
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→ TROCCOLI CARMELO → TUREKIAN VAUGHAN → TURKSON CARDINAL PETER K.A. →
TUROW-PAUL EVE → TUROW-PAUL EVE → VALENTINI RICCARDO → VALKENBURG ALEXANDRA
→ VERBURG GERDA → VIGNOLI MATTEO → VILLARREAL MARCELA → WALLET ABOUBAKRINE
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