



CIHEAM
BARI

A CHANGE OF ROUTE

*TOWARDS MORE SUSTAINABLE AND RESILIENT FOOD SYSTEMS
IN THE MEDITERRANEAN COUNTRIES*

**THE MEDITERRANEAN DIET AS A STRATEGIC RESOURCE
FOR ACCELERATING THE AGENDA 2030 IN THE REGION**



BOOK OF ABSTRACTS

BARI 28-30 SEPT 2022



**3rd WORLD CONFERENCE
REVITALIZATION OF
MEDITERRANEAN DIET**

INTERNATIONAL SCIENTIFIC COORDINATION COUNCIL

Elliot Berry, Hebrew University, Chair, Scientific Committee, International Foundation of Mediterranean Diet (IFMeD)

Gianluca Brunori, Chair, Report of the 5th SCAR Foresight Exercise Expert Group EC; University of Pisa
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SESSION 1

THE UN FOOD SYSTEMS POST- SUMMIT PROCESS: SFS-MED DIALOGUES FOLLOW-UP LINKING NATIONAL PATHWAYS AND MULTISTAKEHOLDER ENGAGEMENTS TOWARDS MORE SUSTAINABLE FOOD SYSTEMS IN THE MEDITERRANEAN

Moderator: **Sylvia Lopez-Ekra**, Deputy Director, UN Food Systems Coordination Hub
Rapporteur: **José Valls Bedeau**, Policy officer, Food Systems and Food Safety Division, FAO

Objective: to connect food systems knowledge and expertise from diverse constituencies through the SFS-MED Platform initiative to support Med countries for accelerating the Agenda 2030.

SESSION 2

FOOD SECURITY IN THE MEDITERRANEAN REGION IN TIMES OF MULTI-LEVEL CRISIS: RESILIENCE, OPPORTUNITIES, AND PROSPECTS

Moderator: **Mouïn Hamzé**, Former Secretary General, National Council for Scientific Research - CNRS-L, Lebanon
Rapporteur: **Virginia Belsanti**, CIHEAM Bari

Objectives: to highlight regional concerns and impacts of the crises of the last 10 years (health, social unrest, global warming, economics and finances, and weakening of regional solidarity / collective responsibility) on food security. To provide successful and promising initiatives, focusing on the contribution of emerging technologies in alleviating vulnerability and securing sustainability in the face of accumulating challenges.

SESSION 3

RESILIENCE AND TRANSFORMATION OF MEDITERRANEAN FOOD SYSTEMS: THE ROLE OF THE MEDITERRANEAN DIET

Moderator: **Gianluca Brunori**, Chair, Report of the 5th SCAR Foresight Exercise Expert Group EC; University of Pisa
Rapporteur: **José Valls Bedeau**, Policy Officer, Food Systems and Food Safety Division, FAO

Objective: to contribute to the 'change of route' by developing a policy framework that qualifies transformation of food systems to resilience.

SESSION 4

ASSESSING THE ADHERENCE OF THE MEDITERRANEAN DIET

Moderators : **Barbara Burligame** (IUNS) & Jacques Delarue (FENS)
Rapporteurs : Furio Brighenti & Marcela Gonzales-Gross

Objective: to address the health and nutrition challenges associated with adherence, and lack thereof, to the Mediterranean diet and propose actions, framed within the context of the Right to Food and the six principles of food security.

SESSION 5

SFS-MED GAME-CHANGING SOLUTIONS FOR A GREEN CIRCULAR ECONOMY

Moderator: **Alessandra Sensi**, Head of Sector Environment and Blue Economy, UfM
Rapporteurs: **Afef Tlili**, UfM Consultant ; **Johanna Klein**, UfM Consultant

Objective: to contribute to Mediterranean food systems change of route towards sustainability by identifying green and circular economy game changing solutions in the food value chains, and the requirement for their replication.

SESSION 6

REINFORCING THE INTER-RELATIONS BETWEEN MEDITERRANEAN AGRICULTURAL HERITAGE AND FOOD HERITAGE FOR SUSTAINABLE DIETS AND FOOD SYSTEMS

Moderator: **Parviz Koohafkan**, President, World Agricultural Heritage Foundation
Rapporteur: **Andrea Ferrante**, Schola Campesi

Objective: to enhance Dynamic Conservation of the Mediterranean Agricultural and Food Heritage Systems through labelling and certification of products and services and contribute to a Change of Route for the revitalization of Mediterranean family agriculture and sustainable food systems.

SESSION 7

THE ROLE OF SMALLHOLDERS AND FOOD BUSINESS IN ENHANCING SUSTAINABLE AND HEALTHY DIETS

Moderator: **Angelo Riccaboni**, Chair Prima Foundation
Rapporteur: **Giovanni Stanghellini**, Prima Foundation

Objective: to highlight the role of farmers and businesses in implementing the MED Diet, assessing and promoting more just, environmentally friendly, profitable, healthy and secure food systems

SESSION 8

LAND USE PLANNING FOR COPING WITH IMPACTS OF WATER SCARCITY AND LAND DEGRADATION ON MEDITERRANEAN FOOD SYSTEMS

Moderators: **Pandi Zdruli**, Senior Research Scientist, CIHEAM-Bari; Feras Ziadat, Land Resources Officer, FAO
Rapporteur: **Siad Si Mokrane**, CIHEAM-Bari

Objective: to deep into the problems, challenges, and solutions. It will show and document that land and water scarcity could be better managed through efficient use of irrigation water and implementation of innovative irrigation systems and sustainable land use planning.

SESSION 9

SFS-MED BLUE GROWTH: BENEFICIAL PRODUCTION AND CONSUMPTION WITH LESS ENVIRONMENTAL PRESSURE

Moderator: **Arni Mathiesen** Senior Advisor, Iceland Ocean Cluster.
Rapporteur: **Massimo Zuccaro**, CIHEAM-Bari

Objective: to provide solutions to improve the role of Aquatic Blue Foods, in the context of its inclusion and role in the Mediterranean Diet, with the aim of reducing its environmental impact and enhancing the beneficial effects on the environment and our human socioeconomic, food and nutrition systems.

SESSION 10

AGROECOLOGICAL TRANSITIONS OF THE MEDITERRANEAN FOOD SYSTEMS: AN ENTRY POINT FOR THE REVITALIZATION OF THE MEDITERRANEAN DIET

Moderator: **Massimo Iannetta**, Head, Biotechnologies and Agroindustry Division, ENEA; Chair, Technical Scientific Committee Italian AgriFood Technological Cluster CL.A.N.
Rapporteur: **Milena Stefanova**, ENEA

Objective: to elaborate on the base of the discussion "a change of route for the Med Diet Revitalization"; to contribute to expected results of the 3d International Med Diet conference



SESSION 11

SFS AS A TRIGGER FOR ONE HEALTH TO PROMOTE RESILIENCE AND SUSTAINABLE GROWTH IN THE MEDITERRANEAN AND BEYOND

Moderator: **Biagio Di Terlizzi**, CIHEAM Bari Deputy Director
Rapporteur: **Rula Atweh**, Project Officer and Coordinator at National Council for Scientific Research of Lebanon

Objective: to share experiences and ideas of concrete application of One Health approach, with the view to identify concrete tools for its enhancement in contexts where production systems are crucial for food security and human health. To dig out how the diversification of food systems through research and innovation might increase food security and boost resilience vis-à-vis fragilities and crises, also building on science-policy dialogue and public-private partnerships.

SESSION 12

CONTRIBUTING TO THE SUSTAINABILITY OF THE MEDITERRANEAN DIET

Moderator: **Alexandre Meybeck**, Center for International Forestry Research (CIFOR)
Rapporteur : **Hamid El Bilali**, CIHEAM-Bari

Objective: to identify actions that contribute to improve the sustainability of the Mediterranean diet and that can ground individual and collective commitments

SESSION 13

GAME-CHANGING SOLUTIONS FROM LESSONS LEARNED FROM WOMEN, YOUTH AND INCLUSIVE SUSTAINABLE LIVELIHOODS IN THE MEDITERRANEAN COUNTRIES.

Moderators: **Wafaa El Dikah**, Senior Gender Expert, CIHEAM Governing Board - Lebanon;
Maroun El Moujabber, Chair, Scientific Committee PRIMA Foundation - CIHEAM-Bari
Rapporteur: **Amel M. Azab**, SDG Climate Facility Project Coordinator, Arab Water Council (AWC)

Objective: addressing gender & generation aspects in the Mediterranean diet to optimize research to a more sustainable and resilience food system approach in line with the Agenda 2030.

SESSION 14

SCIENCE DIPLOMACY, KNOWLEDGE, EDUCATION, AND EMPLOYABILITY FOR EMPOWERING THE MEDITERRANEAN YOUTH

Moderator: **Giuseppe Provenzano**, Higher Education and Research, UfM
Rapporteur: **Yasmine Seghirate**, CIHEAM Paris

Objective: to identify how cooperating on knowledge and skills can make food systems more sustainable and employable

SESSION 15

INNOVATIVE COOPERATION APPROACH BETWEEN RESEARCH AND ENTERPRISES IN SFS MED: OPEN INNOVATION ECOSYSTEMS AND LIVING LABS.

Moderators: **Lamiae Ghaouti**, Institut Agronomique et Vétérinaire Hassan II;
Teodoro Miano, University of Bari
Rapporteur: **Damiano Petruzzella**, CIHEAM Bari

Objective: to compare skills and experiences to overcome the limits of current models and provide concrete guidance to improve the cooperation between research and enterprises in SFS MED.

SESSION 16

RESILIENCE OF FOOD SYSTEMS AND THE MEDITERRANEAN DIET IN TIMES OF CRISIS

Moderator: **Elliot M Berry**, Hebrew University
Rapporteur: **Eduardo Mocini**, Sapienza University of Rome

Objective: to provide solutions for coping with food insecurity and the erosion of the Mediterranean diet in times of crisis through a sociotype framework approach as ecological systems construct for increasing the resilience of food systems in the Mediterranean

SESSION 17

MEDITERRANEAN CITIES AND LOCAL GOVERNMENTS FOR FOOD SYSTEMS TRANSFORMATION

Moderator: **Florence Egal**, International Expert, Territorial food systems and Urban-Rural Linkages
Rapporteur: **Francesca Volpe**, CIHEAM-Bari

Objective: to identify actions of selected Mediterranean cities in food systems transformation, define the role and position of supporting institutions, organizations, citizens and the collaborative way forward to valorize their contribution for sustainable food systems in the Mediterranean region; to propose a network of Mediterranean cities for Food Systems transformation

SESSION 18

CULTURAL UNITY AND DIVERSITY OF THE MEDITERRANEAN DIET: IDENTITARY CUISINE AND SUSTAINABLE TOURISM

Moderators: **Zain Fashho**, Royal Institute for Inter-Faith Studies (RIIFS, Jordanian ALF HoN) and **Enrico Molinaro**, Italian Network for the Euro-Mediterranean Dialogue (RIDE, Italian ALF HoN); Mediterranean Perspectives
Rapporteur: **Sandy Qaqish**, Royal Institute for Inter-Faith Studies, Jordan

Objective: to provide practical and concrete ways to enhance cultural values and exchanges between Mediterranean collective identities

SESSION 19

FINANCE AND INVESTMENTS SDG DRIVEN AS FUNDAMENTAL PUSH FACTORS FOR A SFS-MED CHANGE OF ROUTE

Moderator: **Roberto Ridolfi**, President, link2007: Cooperazione in rete
Rapporteur: **Francesco Rampa** ECDPM

Objective: to contribute to the change of route providing some solutions to relevant questions in the area of financing SFS MED systems.



THE UN FOOD SYSTEMS POST- SUMMIT PROCESS: SFS-MED DIALOGUES FOLLOW-UP LINKING NATIONAL PATHWAYS AND MULTISTAKEHOLDER ENGAGEMENTS TOWARDS MORE SUSTAINABLE FOOD SYSTEMS IN THE MEDITERRANEAN

Moderator: **Sylvia Lopez-Ekra**, Deputy Director, UN Food Systems Coordination Hub;
Rapporteur: **José Valls Bedeau**, Policy officer, Food Systems and Food Safety Division, FAO
Organized by **the SFS-MED Platform coordination desk**

Objective: to connect food systems knowledge and expertise from diverse constituencies through the SFS-MED Platform initiative to support Med countries for accelerating the Agenda 2030.

The Session 1 provided us with the opportunity to gather - here on this very same stage - all the multilateral 2021 United Nations Food Systems Summit (UNFSS) set the stage for a multiplicity of actors across the Mediterranean to engage in dialogues around sustainable food systems, identify the interconnections between food systems and the region's pressing challenges, and explore collaborations to promote an inclusive and resilient transformation towards sustainability. As part of the UNFSS process, countries and stakeholders across the Mediterranean region convened more than 65 Member State and Independent Food Systems Summit Dialogues at cross-national, national and subnational levels, involving more than 5,000 participants. The outcomes of this process led to the formulation of national pathways for the transformation of food systems in several Mediterranean countries. By taking into consideration a plurality of voices and priorities, these pathways shall serve as points of reference across governments and for all relevant stakeholders in their efforts towards more sustainable food systems in coming years.

This session builds on the findings of a series of SFS-MED independent UNFSS dialogues organized in 2021 by CIHEAM, FAO, UfM, PRIMA Foundation and One Planet Network's Sustainable Food Systems Programme. Such dialogues emphasized the role that the SFS-MED Platform, as a multi-stakeholder initiative for Sustainable Food Systems in the Mediterranean, can play as a regional and independent forum to facilitate exchanges and foster activities to transform food systems. The 3rd World Conference will take place one year after the Summit and one year before the 2023 global stocktaking moment of national pathways, therefore providing an opportunity for Mediterranean countries to review progress and possible accelerators for the implementation of national pathways towards the 2023 stock-take and beyond.

As part of their journey towards food systems transformation, countries across the Mediterranean have already formulated a national pathway, or are in the process of developing roadmaps and action plans to integrate food systems approaches in national strategies. Building on these strategic efforts, national stakeholders are now starting implementation of the pathways. However, possible challenges emerge with regards to ensuring effective multi-stakeholder coordination, leveraging needed financial resources, enabling access to knowledge and capacity building for all stakeholders; and building a common understanding of food systems through research, data and innovation sharing.

This session will provide a space for countries to share initial lessons learned from the implementation of their national pathways, in particular regarding enabling factors and challenges they have experienced during their journey. Discussions will also aim to understand how regional and inter-country collaboration across the Mediterranean should contribute to pursue joint solutions in addressing

common food systems challenges. Finally, the session will allow to propose concrete actions at regional, national and local level to accelerate the change of route towards food systems sustainability, which will contribute to the SFS-MED action framework to be presented at the end of the Conference.

MODERATOR:



Sylvia Lopez-Ekra

Ms Sylvia Lopez-Ekra is the UN Resident Coordinator in Morocco (UNRC) since Aug 2020, and the Deputy Director of the Food Systems Coordination Hub since Feb 2022. She served the International Organization for Migration (IOM) from 2002, first as project manager, then leading gender coordination work, and, from 2014 to 2018, as Chief of Mission and Country Representative for IOM offices in Ghana, Benin and Togo. From Dec 2018 to May 2020, she was UNRC ad interim in Ghana. Ms Lopez-Ekra holds a master's degree with honours in International Administration from the Panthéon-Sorbonne University in Paris.

RAPPORTEUR:



José Valls Bedeau

José Valls Bedeau is a Policy Officer in the Food Systems and Food Safety Division of FAO in Rome, where he provides leadership, guidance and operational support for results-based policy assistance, governance, capacity development and facilitates policy dialogue on sustainable food systems. Agricultural Engineer from the Polytechnic University of Valencia and MSc. in Rural Development from the Mediterranean Agronomic Institute of Montpellier, he has 18 years of experience in food security and food systems. He has served in different development organizations and countries, mostly in Central America and North Africa.

INTRODUCTION:



Sandro Dernini

Sandro Dernini, PhD., is currently: Coordinator, SFS-MED Platform Coordination Desk; Senior Advisor CIHEAM- Bari; Secretary-General, IFMeD- International Foundation of the Mediterranean Diet; Chair, Forum on Mediterranean Food Cultures. He received in 2021 the Ancel and Margaret Keys Award at the 2nd International Agrobiodiversity Congress, and, in 2014, the IA-COON-SENC Award of Excellence in Food Sustainability at the Third World Conference of Public Health Nutrition.



Alwin Kopse

Alwin Kopse is Head of International Affairs and Food Systems of the Swiss Federal Office for Agriculture (FOAG). In this role, he is responsible for the design and implementation of the international sustainable agriculture strategy of FOAG and represents Switzerland in international organizations and processes. Before joining the FOAG in 2015, he held leadership positions at the Harvard Kennedy School of Government, the Swiss Federal Institute of Technology in Lausanne, and in various organizations in civil society, the private sector and in the public administration.



FOOD SECURITY IN THE MEDITERRANEAN REGION IN TIMES OF MULTI-LEVEL CRISIS: RESILIENCE, OPPORTUNITIES AND PROSPECTS

Moderator: **Mouin Hamzé**, Former Secretary General, CNRS, Lebanon
Rapporteur: **Virginia Belsanti**, CIHEAM-Bari

Objective: to highlight regional concerns and impacts of the crises of the last 10 years (health, social unrest, global warming, economics and finances, and weakening of regional solidarity/collective responsibility) on food security. To provide successful and promising initiatives, focusing on the contribution of emerging technologies in alleviating vulnerability and securing sustainability in the face of accumulating challenges.

Context:

The COVID pandemic, climate change and regional conflicts of recent years, underlined the devastating consequences on the environment and the fragility of global supply chains, posing an existential threat to existing food security strategies.

Multiple environmental, health, political and economic crises in the Middle East have put this region's food security at major risk. Largely dependent on food imports, the Middle East and North Africa is one of the most food insecure regions in the world. FAO estimated that, in this part of the world, 69 million people were undernourished in 2020. With the Russian war in Ukraine – and both countries being the “breadbasket” of the world, accounting for as much as a quarter of the world's yearly wheat sales – an escalating conflict poses a significant risk, leaving the MENA region in need of intensifying efforts to minimize further obstruction to its food security.

In an attempt to tackle the increasing risks of food insecurity, emphasizing innovation and cooperation, are crucial to boosting productivity and sustainable natural resources management, with the agricultural sector standing to benefit significantly from crucial improvements in export-oriented strategies, regional coherence integration, sharing knowledge and new emerging technology. The Plenary will be organized around the following topics:

- What was the impact of the recent COVID-19 pandemic on food security in the region, and how effective were State responses?
- Why the Russian war in Ukraine lead to food insecurity in the Arab region?
- Which countries will be the most affected by this double crisis, and what are the most effective social protection and international programmes put in place to ensure long-term resilience in the face of other crises in the future?
- How to prevent the current multidimensional crises from turning into social unrest and a regional economic recession spiral?
- What contributes to a successful food security policy dialogue at the regional level and what measures should be taken to make the MENA region more food secure and climate resilient in the future?
- What steps could be taken to enhance productivity and technological developments in the agricul-

tural sector? How to create value for investing in agriculture? And in what ways can the international community support local agricultural production in the face of water scarcity and climate change?

When it comes to securing food for humanity, all actors need to face reality, take stock of risks and challenges, and through an exhaustive search of regional strategies for building resilience of the Mediterranean in food security, face the challenges of the current historical passage and turn them into opportunities.

MODERATOR:



Mouin Hamzé

Doctor Es-Science from France, Expert and author of international reports on Science policy, research, development & innovation. Mouin Hamzé has served as the Secretary General of the National Council for Scientific Research, CNRS-L, until June 2022. Professor and former Dean of the Faculty of Agricultural Sciences - Lebanese University and Chairperson of the Lebanese Agricultural Research Institute. He led EU and international projects, and has been actively involved and chaired several international and regional organizations. Most recently, he co-authored a book entitled “Empowering Knowledge and Innovation: Challenges for the Arab Countries.”

RAPPOREUR:



Virginia Belsanti

Virginia Belsanti, senior international officer, with over 15-year expertise in R&I international cooperation and capacity building at CIHEAM Bari. Well-established experience in EU grant applications from FP7 to HE, project management experience in EU projects' activities, senior expert in research management, post-graduate coaching, stakeholder engagement and participatory approaches. Topic expertise in sustainable agriculture, rural development, food systems, innovation systems, science diplomacy, research and innovation cooperation.

PARTECIPANTS:



Thierry Dupeuble

Thierry Dupeuble has a PhD in economy. He is a specialist of public policies towards sustainable agriculture and rural development, working within the French ministry for agriculture. As such, he recently worked on the declination of the national food policy at the regional level. Since 2021, he is the director of CIHEAM Montpellier.



Charalampos Kasimis

Former Secretary General of Agricultural Policy & Management of European Funds of the Ministry of Rural Development & Food of Greece (2015-2019) and Board member and Vice President of CIHEAM (2016-2020). Areas of interest: agricultural policy and rural development in Greece, the Western Balkans and the Mediterranean region.



Wafaa El Khoury

Wafaa El Khoury has over 20 years of agricultural development experience with UN agencies, USAID, GEF-UNDP and other NGOs, as well as, researcher with ICARDA. She covered areas of rural and agricultural development, biodiversity, extension, marketing and agribusiness working with rural communities, farmers as well as the agroindustry. She was vice president of the International Society of Plant Pathology and was active at the Arab Society for Plant Protection, acting as President, Vice President and Secretary Treasurer. She is currently Service Chief for Europe and Central Asia, Near East and North Africa, Latin America and Caribbean at the Investment Center at FAO.



Hammou Laamrani

Hammou Laamrani has a PhD in Environment and Water Sciences from Copenhagen University. He is a researcher at Agronomic and Veterinary Institute, Rabat, and at International Water Management Institute, Ghana. He is Senior Programme Office at Canadian- IDRC, Environment and Food Security programmes, Egypt; Senior Advisor on Climate change and water in MENA, GIZ; Senior Expert, Water- Energy-Food and Climate Nexus, at League of Arab States, Egypt. Currently, he is an Economic Affairs Officer, UN ESCWA, NAFS programme, Lebanon.



Mahmoud Sak



Maria Cristina Russo



Abdelhamid El Zoheiry



RESILIENCE AND TRANSFORMATION OF MEDITERRANEAN FOOD SYSTEMS: THE ROLE OF THE MEDITERRANEAN DIET

Moderator: **Gianluca Brunori**, Chair, Report of the 5th SCAR Foresight Exercise Expert Group EC; University of Pisa

Rapporteur: **José Valls Bedeau**, Policy Officer, Food Systems and Food Safety Division, FAO

Objective: to contribute to the 'change of route' by developing a policy framework that qualifies transformation of food systems to resilience.

The Ukrainian war is only the last of a series of systemic crises the world is experiencing and occurs when the COVID-19 pandemic is still showing its effects. Global change and global interconnection have increased the frequency and the intensity of catastrophic events and their systemic impact. Systemic crises affect dramatically vulnerable groups and make food systems more vulnerable to other hazards.

Built in different historical contexts, current food systems are not prepared to face systemic crises. They are heavily specialized, rely on long-distance trade, are calibrated to maximize yields in ideal conditions and not to resist to adversities, depend heavily on fossil fuels, generate high pressure on the natural capital. To work properly, a stability of external conditions (trade, climate, geopolitical) that no longer exist is assumed.

One of the key reasons for "a change of route" that brings to a transformation of current food systems is the need to substantially improve food systems' capacity to anticipate, prevent, absorb, adapt to shocks and stresses. The complexity of such a task is related to the rigidity of the paradigms that have governed them so far, fully focused on supply and production, while it is more and more clear that the resilience of food systems can be achieved only when the interplay between the way food is consumed, processed and distributed, and produced is addressed adequately.

One of the key properties of resilience food systems is their capacity to mitigate the risks through diversification, which implies increasing the diversity of production systems, of supply chains, and of diets, and of the related actors and activities.

Mediterranean countries have experienced in the last year a push to diversification of production and distribution systems and, to a certain extent, of consumption patterns, thanks to multifunctional agriculture, agroecological practices, short supply chains, quality certifications, food movements. New actors - innovative farmers and enterprises, public administrations and civil society - have contributed to this trend, but the magnitude of change is still largely unsatisfactory, and the dominance of the old paradigm on public policies, private strategies, consumers' behaviour is still strong.

As the debate in the last months has shown, the crisis can be both a catalyst of change ("building back better") or a justification for conservative forces to delay or to halt the transformation. Old paradigms, as the one that conflates food security with availability, can push the system in the wrong direction, putting into discussion the choices made to advance towards sustainability.

A change of route is necessary. New policy frameworks need to consider risk as constitutive component of food systems, and the structures, the strategies, and the practices of resilient food systems need to be built on the awareness of the possibility that worst scenarios could occur. This will change the policy agenda and the policy mix, and will generate new policy evaluation criteria.

The panel will address this theme focusing on the role of the Mediterranean Diet as a catalyst for change in Mediterranean countries. It will discuss to what extent consumption, production, processing, distribution, trade patterns consistent with the principles of the Mediterranean Diet can meet the sustainability and resilience goals. It will interrogate the participants on which resources - natural, cultural, social, institutional - peculiar of each context diversification strategies can be based. Best practices at all levels - private, public, civil society - will be reported, and a policy roadmap - considering priorities, identifying actors' responsibilities, defining targets - will be discussed.

MODERATOR:



Gianluca Brunori

Gianluca Brunori is Full Professor at the University of Pisa, where he teaches Food Policy and Bioeconomy. As a researcher, he has accumulated 30 years of experience in the fields of Agricultural Economics, Rural Sociology and Food Policy, participating to several European Projects, in three of them (TRUC, GLAMUR, and DESIRA) as scientific coordinator. He is chair of the Scientific Advisory Board of the Joint Programming Initiative "Agriculture, Food Security and Climate Change" (FACCE) and member of the High-Level Expert Group (EG) of the EU Commission to explore options to strengthen the international science-policy interface for food systems transformation.

RAPPORTEUR:



José Valls Bedeau

José Valls Bedeau is a Policy Officer in the Food Systems and Food Safety Division of FAO in Rome, where he provides leadership, guidance and operational support for results-based policy assistance, governance, capacity development and facilitates policy dialogue on sustainable food systems. Agricultural Engineer from the Polytechnic University of Valencia and MSc. in Rural Development from the Mediterranean Agronomic Institute of Montpellier, he has 18 years of experience in food security and food systems. He has served in different development organizations and countries, mostly in Central America and North Africa.

PARTICIPANTS:



Francesca Galli

She is a senior researcher at the Department of Agriculture Food and Environment, University of Pisa (Italy), where she teaches "Food Policies" and "Agricultural Economics". After the Ph.D. in "Economics and Territory" (at University of Tuscia, Viterbo, 2011) focusing on "Multi-criteria" assessment of food products with Protected Designations of Origin and Geographical Indications, she continued working mostly on international research projects. Benefiting from inter-disciplinary perspectives, working in connection with relevant societal and policy actors and networks, she expanded the view on the multidimensionality of agriculture and food and the socio-economic and political challenges that characterize contemporary agri-food systems.

Med-diet, biodiversity and food system resilience: what role for Neglected and Underutilized crops in the Mediterranean area?

Biodiversity loss is a critical food system challenge that needs to be carefully considered now and, in the future (EU Biodiversity Strategy, 2020). Dietary diversity, as a condition for food and nutrition security

and food system resilience, is in turn, the result of well preserved and valorised agro-biodiversity (Waha et al. 2022). Literature (particularly from developing countries) reports that under valorized crops are cultivated varieties, semi-domesticated, or wild plant species that tend to be underutilized locally or globally, that due to their relatively low value for the global market, have great untapped potential to support smallholder farmers and rural communities by improving their incomes and food and nutritional security, while sustaining the genetic resources needed to address present and future environmental challenges. Promising Neglected and Underutilized Species (NUS) that are nutrient-dense, climate-resilient, profitable, and locally adaptable are seen as a viable means to improving production and dietary diversity (Scarano et al. 2021; Lbiad et al. 2021; Hunter et al. 2019; Kahane et al. 2013). This contribution addresses the link between NUS and the Mediterranean diet, taking a food system perspective to their valorisation. What is the potential role played by NUCs in the Mediterranean diet re-definition? What is the extent of such untapped potential? Can the Mediterranean Diet enhance consumer knowledge and awareness on NUCs? We review available literature on NUCs from the Mediterranean area and integrate it with some preliminary results of the DIVINFOOD EU project, focusing on neglected varieties of food legumes and cereals. We discuss the barriers and enablers of NUCs cultivation and processing within a Mediterranean context and highlight possible synergies and obstacles to their valorisation within the Mediterranean diet.



Mirjana Gurinovic

Mirjana Gurinovič, MD, PhD Nutrition, is an EC and WHO Expert, FAO Nutrition expert consultant, research team leader at the Centre of Research Excellence in Nutrition and Metabolism, Institute for Medical Research, University of Belgrade, National Institute of Republic of Serbia. She had leading and active role in several national, bilateral and international food and nutrition research projects: EC FP6 and FP7 NoE projects, including EURRECA, EuroFIR, CHANCE, EuroFIR-Nexus, BACCHUSS, ODIN, four EFSA projects, Horizon 2020-FNS Cloud project, BIOVALUE, GIANT LEAPS, CEI-TRAIN-DIE, and member of project advisory board in EuroDISH project.

Food consumption data collection harmonization in national dietary surveys in Balkan region for diet monitoring and food systems transformation

Gurinovic M.^{1,2}, Milešević J.^{1,2}, Zekovic M.^{1,2}, Kadvan A.², Knez M.^{1,2} and Glibetic M.^{1,2}

1) Center of research excellence in nutrition and metabolism, Institute of medical research, University of Belgrade, National Institute of Republic of Serbia, Tadeuša Košćuška 1, 11000 Belgrade, Serbia

2) Capacity Development Network in Nutrition in Central and Eastern Europe, CAPNUTRA, Cara Dušana 6, 11000 Belgrade, Serbia

Harmonized and standardized individual dietary data collection, processing, and analysis are imperative for dietary assessment and informed policymaking. There are many challenges and gaps on national and worldwide levels in the field of food consumption data. While there are evidence-based guiding principles for healthy diets, it has been challenging to develop valid food- or diet-related metrics of diet quality for global monitoring because of the wide variety of foods consumed and dietary patterns observed worldwide. The scarcity of harmonized and comparable data on people's diet across countries adds to the challenge of monitoring trends in diet quality worldwide. In the process of harmonizing food consumption data collection methodology and building a common European comprehensive food consumption database, the European Food Safety Authority (EFSA) within the EU Menu project, supported 36 dietary surveys on children and/or adults from 18 European Union Member States and four pre-accession countries (Balkan countries). Recognizing the lack of relevant and harmonized research and data on food and nutrition in Balkan region, scientists from Capacity Development Network in Nutrition in Central and Eastern Europe (CAPNUTRA) and Center of research excellence in nutrition and metabolism, Institute of medical research, University of Belgrade, National Institute of Republic of Serbia

(IMR-CENM) focused their activities in the field of capacity building in nutrition research particularly on the creation of contemporary, harmonized research infrastructure (RI) compliant with European standards. The EFSA EU Menu methodology in Balkan countries was implemented through adaptation and exploitation of an innovative comprehensive tool for standardized food consumption data collection and dietary intake assessment, the Diet Assess and Plan (DAP). The DAP has essential features of RI necessary for strengthening surveillance, monitoring, evaluation, and research in the public health nutrition field. This is a rare example of a standardized and harmonized tool for dietary assessment surveys, i.e., food and nutrition data collection in Balkan region and wider. Its features make it a concurrent tool for large nutrition epidemiology studies, and present one of the New Technologies for Dietary Intake Assessments. National dietary surveys were performed from 2017 to 2021/2023 in adults 10–74-year-old (Bosnia and Herzegovina, Montenegro, and Serbia) and in children three months–nine years old (in Montenegro, North Macedonia, and Serbia). Collected food consumption data in four Balkan countries is internationally comparable with other European countries within the EU Menu program framework. Existence of this data will be used for dietary and exposure risk assessment, the establishment of national nutrient reference values, as a base for food based dietary guidelines development, provide evidence and infrastructure for lacking policymaking in the field of public health nutrition and legislation establishment in the region, and will tailor the ways for transformation of Balkan food system toward more nutrition-sensitive and sustainable based on country-specific food consumption data, as well as longitudinal monitoring of the dietary patterns and nutrient intake and evaluation of dietary changes in the future period.



Paolo Prospero

Paolo Prospero is Lecturer and Researcher of Agricultural and Food Economics at the Mediterranean Agronomic Institute of Montpellier (CIHEAM-IAMM) and member of the Montpellier Interdisciplinary Center on Sustainable Food Systems (MolSA). He develops research on economic dynamics of sustainable food systems, agri-food value chains and business models in international multi-actor projects.

Resilience and diversity of business models towards sustainable food systems and diets

System thinking applications by scholars and international organisations in the last two decades have strongly accelerated the shift from a linear understanding of the agriculture and food sector functioning to a circular representation of food system dynamics. Rethinking food systems through a system approach allows to design more resilient and sustainable food systems. Sustainable healthy diets are the main outputs of sustainable food systems as dietary patterns that promote all dimensions of individuals' health and wellbeing through low environmental impact, improved accessibility, safety, equity and cultural acceptability. Sustainable diets, however, need to be supported by sustainable practices, organisation, consumption behaviours, business models and governance arrangements. Business models, both at individual business and value chain levels, describe the logic of a business across value creation, proposition and capture, and they can be resilient and adaptive in the face of changing conditions and factors. If on the one hand it is important to highlight the resilience potential that is brought from the existing large diversity of business models that contribute to the outcomes of food systems - such as small farms in the Mediterranean region - on the other hand sustainable healthy diets need to be supported by a structured stakeholder coordination that can be obtained through the establishment of good governance as an innovative dimension within business models and among value chain stakeholders.



Dominique Barjolle

Dominique is a lecturer and senior researcher at ETH Zurich and the University of Lausanne. She teaches food security and supervises master's theses in environment and agriculture. Her main topics are resilience at the farm level, territorial approaches to agro-ecological transition, and the transformation of food systems towards sustainable consumption and production. She is involved in several Swiss and European research projects that link local development of rural communities with urban consumption patterns, in a participatory approach that puts science at the service of local development.

Co-construction of new pathways for Mediterranean local food systems: the role of origin-linked products respecting the agroecology principles

Mediterranean agricultural and food systems are under strong pressure: climate change affects the agronomic aptitudes of the areas exploited, whether in the form of perennial crops, cereal crops or livestock activities, including the exploitation of pastoral areas. The globalisation of trade, the specialisation of many territories on products exported outside the production areas, and the concentration of distribution in the hands of wholesalers on the food markets exerts a strong pressure on the dilution of food patterns and is a threat to health and the environment, and leads to a progressive abandonment of the Mediterranean Diet. Our contribution is to discuss how to revitalise the flagship products of the Mediterranean Diet, by mobilising local food supplies of local products within a territorial agroecological approach. We illustrate the approach using the example of the participatory certification of a territorial brand in Thessaly, Greece.



Maria Partalidou

Maria Partalidou is an Associate Professor (Rural Sociologist) at Aristotle University of Thessaloniki, Greece. She is on the scientific task force for the «Thessaloniki Food Policy Council» and was involved in the successful application of the city in UNESCO Creative Cities of Gastronomy. She stands also at the advisory board of the national Greek Diet Committee.

Mediterranean Diet as a locus of a more democratic food system

We all accept that our food choices are of great importance and shape our communities. People made types of choices for their food systems through history and they are making also nowadays all kinds of choices under different claims and challenges. Mediterranean Diet is known to advocate on moderation and balance mainly through the lens of environmental sustainability but there is also potential benefit of MED to the social pillar of sustainability and in fact MED can be a locus of a more democratic food system. As the cup of justice by Pythagoras advocates on the importance of moderation and equality and justice, all choices come with consequences and sometimes through conflict. Establishing a strong food democracy constitutes a genuine transformation of our societal values and practices to a more resilient agro-food system, with moderation. Towards this direction we have strong evidence that we can achieve this transformation with MED building on fresh local, nutritional, healthy, culturally acceptable, and at the same time providing fair prices, fair wages, good living conditions to farmers and farm workers. But on the other hand, we have to work towards the adherence of MED as more and more we observe a change in dietary patterns, low consumption of olive oil for instance is one of the great concerns currently even in Mediterranean countries. Social innovations on the ground such as open farms, agrotourism, winetourism, olive-oil roots that offer a platform for events, for discussions, food tasting,

cooking classes, minimize the gap between the rural and the urban are an important pathway for the future. Socially acceptable Mediterranean food systems do exist and examples of social innovations within this system are fully integrating the cultural dimensions of MED and their links to landscapes and communities.



ASSESSING AND PROMOTING ADHERENCE TO THE MEDITERRANEAN DIET

Moderators: **Barbara Burlingame**, Chair, IUNS Sustainable Diets Task Force

Jacques Delarue, Secretary FENS

Rapporteurs: **Furio Brighenti**, University of Parma

Marcela Gonzales-Gross, Universidad Politécnica de Madrid

Objective: to address the health and nutrition challenges associated with adherence, and lack thereof, to the Mediterranean diet and propose actions, framed within the context of the Right to Food and the six principles of food security.

The aim of this session is to address the health and nutrition challenges associated with adherence, and lack thereof, to the Mediterranean diet and propose actions, framed within the context of the Right to Food and the six principles of food security.

Traditional MedDiet was the predominant dietary pattern among populations in the Mediterranean basin before the mid-1960s. Despite the health benefits associated with MedDiet, an industrialised Western diet has gradually replaced MedDiet in Mediterranean countries, -to the detriment of both human and ecosystem health. The so-called “nutrition transition” is dramatically evident in every country of the Mediterranean basin. It is therefore important to understand and measure this phenomenon in order to develop policies and programs to encourage a return to the traditional MedDiet.

To this end, several scoring systems have been developed to operationally assess the (mainly health) effects of MedDiet. Historically, the first was the MedDiet Score (MDS) defined by Trichopoulou et al. to assess the association between MedDiet adherence and mortality in a population of elderly people in Greece. The MDS (0-9 points) consisted of eight components: six beneficial components (monounsaturated/saturated fat ratio, vegetables, fruits and nuts, legumes, fish, cereals), two harmful components (meat/meat products, dairy products), and moderate alcohol consumption (5-25 g/d for women, 10-50 g/d for men). One point was assigned to positively weighted items if consumption was superior or equal to the sex-specific median, and one assigned to negatively weighted items if consumption was inferior to the sex-specific median. The MDS was further modified by the same authors to include fish consumption as a beneficial component. The MDS has been used in many studies since its definition. Fidanza et al. have defined the MAI for the Seven Countries study report after 25 years of follow-up. The PREDIMED Screener score (0-14 points) was defined by Estruch et al. for their RCT aiming to evaluate the primary prevention effects of MedDiet on CHD events in a high CV risk population.

Several other indexes of adherence have emerged over the years until recently to study the association of MedDiet adherence with health outcomes, and at least indirectly with environmental sustainability outcomes. Searching PubMed through October 2014, Hernandez-Ruiz et al., in their review, found 22 indexes with differences regarding the number of components (7-28), scoring (0, 1, 2, 3, 4, 5, 8, or 10, if adherent), range (0-100), and type of components (foods, food groups, nutrients, and/or lifestyle factors). Fruits and vegetables were the most common beneficial components, and meats were the most common detrimental components. Moderate alcohol consumption was common to all indexes and was considered positive, but its definition differed among indexes: 10-20 g/day, or 5-25 g/day in women and 10-50 g/day in men, or 0 g/day in women and up

to 10 g/day in men. Another difference between indexes was the scoring system and the cut-off points (in medians, terciles or established portions). Milà-Villarroel et al. evaluated the reliability of 10 MedDiet adherence indexes, including the MDS, MAI, and PREDIMED scores. They found that all 10 indexes satisfactorily assessed MedDiet adherence, but that there was a lack of internal consistency among the indexes, arguing for standardization. Sofi et al. in their meta-analysis of 27 cohorts, addressing the association of MedDiet with health status, reported all selected cut-offs for different MedDiet adherence indexes. Because of the wide distribution of median consumption of some food groups (legume consumption ranged from 2 to 75 g/d), the data were log-transformed. This highlights the difficulty and the value of harmonizing the adherence indexes to allow for better comparability between studies.

Despite benefits associated with the MedDiet the Mediterranean region has experienced significant shifts toward industrialised and globalized diets. As discussed above, the MOLI-SANI study has shown that socioeconomic factors, nutrition knowledge and education were important contributors to the loss of adherence to MedDiet. However, what is also important is the ability of populations to adhere to a Mediterranean dietary pattern over the long term, which may require policies and promotional actions to affect the “change of route” for a return traditional food systems and food choices for both human and planetary health. Thus, for all these reasons, we must (i) try to reach a consensus to better define, if possible, by a single index, the adherence to MedDiet and (ii) develop through a voluntary code of conduct recommendations for different sectors (primary producers, food industry, health, environment, food service and consumers, etc.) to improve adherence to sustainable Mediterranean Diets, using a rights-based approach, grounded in tradition, respectful of biodiversity and ecosystems, and consistent with Sustainable Development Goals.

MODERATORS:



Barbara Burlingame

Barbara Burlingame is nutrition scientist and Professor of Public Health Nutrition and Food Systems. For 16 years she worked at the Food and Agriculture Organization, most recently as Chief/ Deputy Director of Nutrition. Currently, she is member of the HLPE Steering Committee of the CFS, she chairs the IUNS Sustainable Diets Task Force, and she's specialty chief editor of *Frontiers in Nutrition*, and member of the Global-Hub on Indigenous Peoples' Food Systems. In 2021, Prof Burlingame was one of three people awarded the Ancel and Margaret Keys Prize in recognition of her contributions to the Mediterranean Diet.



Jacques Delarue

Jacques Delarue obtained the position of Professor of Nutrition in 2000 at the University of Brest, where he currently chairs the Department of Nutritional Sciences. His research theme focuses on the effects of long chain n-3 fatty acids towards insulin-resistance and cardio-vascular risk. He is President of French Nutrition Society, President of the French College of Nutrition Educators of Medical Schools, Secretary of FENS and Vice-President of the Mediterranean Federation of Nutritional Sciences. He will chair the ICN-IUNS Congress of Paris 2025.

RAPPORTEURS:



Marcela González-Gross

Marcela González-Gross is full Professor for sport nutrition and exercise physiology at the Faculty of Physical Activity and Sport Sciences-INEF at the Universidad Politécnica de Madrid (Spain). Head of the research group on nutrition, exercise and healthy lifestyles. Research lines include the impact of nutritional status both on functional and cognitive level of healthy subjects and those with risk factors with different levels of fitness and physical activity. She is Vice-president of the Spanish Nutrition Society, board member of FENS and "Fellow of the international union of nutritional societies (IUNS), among other worths.



Furio Brighenti

PARTICIPANTS:



Antonia Trichopoulou

Antonia Trichopoulou, President of the Hellenic Health Foundation, Professor Emeritus of the University of Athens. Her scientific work focuses on public health and nutritional epidemiology, emphasizing health effects of the Mediterranean diet and traditional foods. She has received numerous awards. In 2011, she received the FENS Award for her "outstanding nutritionist career". Named in Thomson Reuters 2014 "World's Most influential Scientific Minds" List and awarded as a Highly Cited Researcher by Clarivate Analytics in 2018 and 2021 and decorated with the Golden Cross of Honour by the President of the Greek Republic.



Francesco Sofi

Francesco SOFI is Associate Professor of Food Science and Clinical Nutrition at the Department of Experimental and Clinical Medicine of the University of Florence. He is director of the Unit of Clinical Nutrition of the University Hospital of Careggi, in Florence, and director of the Interdepartmental Centre for Research on Food and Nutrition of the University of Florence. He has been member of the National Committee for Health Research of the Minister of Health. He is author of about 230 scientific studies, published in peer-reviewed International Journals. He won several national and international prizes.



Nhala Hwalla

Nhala Hwalla is a professor of Nutrition at American University of Beirut. She has served as Dean of the Faculty of Agriculture and Food Sciences for 11 years. She has published on adherence to the Med diet and sustainability of Lebanese food consumption, and food insecurity in Lebanon, with over 150 articles on nutrition and related diseases. Recently, she was elected as the president of the first Lebanese Order of Dieticians.



Lluís Serra Majem



Rehia Belhasen



Sandro Dernini

Sandro Dernini, PhD., is currently: Coordinator, SFS-MED Platform Coordination Desk; Senior Advisor CIHEAM- Bari; Secretary-General, IFMeD- International Foundation of the Mediterranean Diet; Chair, Forum on Mediterranean Food Cultures. He received in 2021 the Ancel and Margaret Keys Award at the 2nd International Agrobiodiversity Congress, and, in 2014, the IA-CON-SENC Award of Excellence in Food Sustainability at the Third World Conference of Public Health Nutrition.



SFS-MED GAME-CHANGING SOLUTIONS FOR A GREEN CIRCULAR ECONOMY

Moderator: **Alessandra Sensi**, Head of Sector Environment and Blue Economy, UfM
Rapporteurs: **Afef Tlili**, UfM Consultant ; **Johanna Klein**, UfM Consultant

Objective: to contribute to Mediterranean food systems change of route towards sustainability by identifying green and circular economy game changing solutions in the food value chains, and the requirement for their replication.

Increasing demand for food, overexploitation of natural resources, and the adverse impacts of climate change on water availability, land fertility and agricultural productivity put severe pressure on food systems, especially in fragile Mediterranean ecosystems. At the same time, intensified and industrial-scale food systems come along with the growing use of synthetic fertilizers and pesticides, intensive irrigation and breeding, and the use of heavy machinery - all of which contribute to air, soil and water pollution and degradation, high agri-food carbon footprint, biodiversity loss and negative health impacts (both under- and over-nutrition) while failing to achieve fair economic returns and livelihoods for all actors, in particular for primary producers.

While some Mediterranean countries are already experiencing food insecurity, the covid-19 sanitary crisis, which induced economies and trade shutdowns, as well as the ongoing war in Ukraine, showcased the relevance of resilient and shorter food chains to achieve national and regional goals of food security and safety.

The green and circular economy (GCE) practices along food systems value chains were highlighted as potential drivers for communities' socio-economic well-being, safeguarding already threatened resources and ecosystems, as well as creating jobs and economic opportunities while producing healthy, affordable and sufficient food for the Mediterranean communities.

As shown in the "Stocktaking Exercise on Food systems transformation – processes and pathways in the Mediterranean", tackling Mediterranean food systems transformation towards resilience and sustainability relies on a systemic approach to be dynamic, multi-sectoral, context-specific and based on science-guided innovative practices. Food systems transformation is necessarily coupled with circular and green concepts, as highlighted by the EU 'from farm to fork' strategy. The UN SDG 2 achievement also depends on a leap toward greener solutions through circular food production practices as levers for a 'zero hunger' farming system.

Hence, this required transformation of food systems relies firstly on a shared understanding of green and circular economy concepts and applicability to farming systems, particularly tailored to local producers' technical and financial capacities.

This session will be an opportunity to exchange around these topics, putting the transition of the Mediterranean farmer and farming systems at the centre of the debate, trying to answer the questions i) why should a farmer switch from existing farming systems towards SFS through GCE; ii) what are the actual challenges to food systems transformation through GCE; iii) what is needed to make this transformation happen; and iv) what is already in place enabling SFS.

To act as a key enabler for a greener economy and accelerate the circularity of current agricultural

practices, a significant transformation of the agri-food sector should be based on recognizing the interconnected social, cultural, ecological, and economic dynamics of agricultural value chains and products.

Applying circular economy principles in Sustainable Food System models improves the socio-economic and ecologic system performance and resilience. The circular food production patterns enhance local and small farming models, creating in-sector dynamics and benefiting local producers and consumers in terms of economic opportunities, decent food prices, and healthy fresh markets. In this sense, one key pillar of food systems transformation towards sustainability is the adherence of small-scale farmers to GCE practices, based on a sound understanding of this economic model ahead with the potential benefits in terms of societal, environmental, and mainly financial sustainability. Circular economy principles also lead to a reduction in food waste, as was highlighted throughout a webinar series on "Food losses, food waste reduction and organic waste management in the Mediterranean region", organized by the Union for the Mediterranean, FAO, PRIMA and the Interreg MED Green Growth community.

While food producers need to be aware of the enabling legal, institutional, financial, and fiscal environment, food consumers and their consumption habits play a significant role in influencing the supply chain and markets towards sustainability. This interconnection between sustainable production and consumption is the mainstay of GCE and food systems transformation in the Mediterranean.

MODERATOR:



Alessandra Sensi

Alessandra Sensi has a University Degree in Political Science, Economic Branch, and a Master's degree in Management and Economics of Energy and Environment. She is Head of Sector for Environment, Green and Blue Economy at WEBE – the Water, Environment and Blue Economy Division of the Secretariat of the Union for the Mediterranean since March 2013. She was Programme Manager of the Environment/Green and Blue Economy/Climate Change portfolio at the European Commission, EuropeAid, between 2009 and 2012. Before, she worked for FAO, Rome; for UNEP/GEF in Nairobi and Geneva; for the Development Cooperation Office of the Italian Ministry of Foreign Affairs in Hanoi, Vietnam; and for Eurostat - the Statistical Office of the EU, Luxembourg.

RAPPORTEURS:



Afef Tlili

Afef Tlili is a consultant with a large experience on key environmental issues including climate change, fight and resilience, sustainable food systems, energy and water management. Particularly familiar with the complex MENA and Mediterranean ecological and socio-economic contexts, she collaborated with several technical and financial partners.



Johanna Klein

Johanna Klein is a consultant to UfM, supporting the UfM Environment Agenda, as part of GlobalCAD. She has a Master's degree in Sustainable Development and CSR from the EOI Business School in Madrid and is specialized in Green and Circular Economy with more than 15 years of experience.

PARTICIPANTS:



Roberta De Palma

She is acting as chief technical advisor of the SwitchMed initiative at the United Nations Industrial Development Organization (UNIDO). She is responsible for the strategic oversight and technical delivery of a regional programme in the North African and Middle East countries focusing on promoting industrial resource efficiency in the manufacturing sector, advancing circular business solution along textile and plastic value chains and in blue economy key sectors such as fish processing and aquaculture. She has a master degree in Mechanical Engineering with a specialization in cleaner technology and more than 25 years of working experience in managing complex sustainability projects in industry in the field of resource efficiency, corporate responsibility, eco-innovation and circular economy. She experienced working on several assignments for the private sector, the European Commission, the UN and the International Finance Corporation (IFC).

Why should Mediterranean farming systems switch towards SFS through GCE?

The food and agricultural sector is the most important contributor to local economies in the region, but it is also responsible for pollution and high wastage of natural resources, poses a challenge to biodiversity and has a significant carbon and water footprint. Large amounts of agri-food losses occur along the value chain and are mostly related to poor handling/harvesting and storage, low efficiency of industrial food processing, extensive logistics and unsustainable marketing at retail level. Besides organic farming and short supply chains, the valorisation of by products as feedstock for industry, with different level of value addition, offers an opportunity not only to close the natural cycle of biomass but also to create jobs, generate revenues and boost the resilience of local economies against external stressors. There are a variety of industrial applications for bio products ranging from energy, extraction of food ingredients, cosmetic/pharma or textile. Eco-innovation and resource efficiency in the food processing industry has huge potential. Food processing industries that are using less water or reuse water, use renewables and consume less raw materials are more flexible and capable to adjust to supply chain disruption due to extreme events.

The transition towards green and circular food systems in the Mediterranean requires transfer of knowledge, setting up dedicated financial instruments and advancing regulatory reforms including those related to the use of bio-based products, and skills development especially for SMEs, women and youth.



Joan Colón

He is the head of the "Sustainability Accounting and Optimization" research area at the BETA Technological Centre (UVIC – UCC, Spain). He is expert in assessing environmental, social and economic burdens associated to agri-food processes/products. He has a strong engineering background on waste valorisation as well as in GHG monitoring.

Sustainable solutions from the ground: valuable case studies

A sustainable food system (SFS) is a dynamic process in which achieving food and nutrition security today should also contribute to food and nutrition security for future generations. SFS seeks sustainability in three complementary dimensions (environmental, economic and social) and covers the whole value chain (Sustainable food production, sustainable food processing & distribution, Sustainable food consumption and Food loss & waste prevention). The Mediterranean diet, which is considered an Intangible Cultural Heritage of Humanity (UNESCO), has the potential to be an example of SFS and to decisively contribute to the achievements of the EU Green Deal and the Farm to Fork strategy.

Examples of green and circular economy practices such as environmental accounting (Product Environmental Footprint) and communication (ecolabelling), as well as socio-cultural benefits from real case studies will be shown to showcase the sustainability benefits of the Mediterranean diet and its products. Experiences from projects working under the umbrella of the Interreg MED Green Growth Community (e.g., PEFMED assessing PEF in key agrifood products, ARISTOIL reinforcing olive oil sector competitiveness or CAMARG promoting km0 agrifood e-marketplace) will be showcased.



Ines Maghzaoui

Sous Directeur d'analyse des données, Agence de Promotion des Investissements Agricoles Tunis, Tunisie

Challenges, enablers and requirements to apply GCE solutions to SFS, including economic/ fiscal/financial measures

The transition to sustainable food systems requires coordination between all actors in the agri-food value chain and food policies consistency.

In Tunisia, the current food systems need improvement to sustainably produce the necessary quality of food while guaranteeing sustainable economic growth, a fair income for producers, environmental preservation and local development. For this, an arsenal of incentives and specific advantages within the framework of the investment law 71/2016 have contributed to the promotion of sustainable agri-food investments. Three main axes will be supported, namely incentives to investments targeting:

1 Adaptation and resilience to climate change, mainly through the rational exploitation of natural resources: Organic farming, water and soil conservation works, planting trees resistant to droughts, water saving equipments, desalination of unconventional water and photovoltaic equipments, etc.

2 Value chains orientated towards the integration of agriculture in the industrial sector and a better valorization of agricultural products (1st processing) as well as the valorization of by-products and the reduction field losses to improve production efficiency and farmers' incomes.

3 Intangible investments, mainly products certification, patents for inventions, and support for entrepreneurs in the field of sustainable development through innovative solutions applicable on the ground. The APIA will obtain the green climate fund accreditation (readness).



Florence Tartanac

Senior Officer in the Food and Nutrition Division at FAO Headquarters in Rome, Italy. She is Team Leader of the Market linkages and value chains team and her areas of expertise are sustainable food value chain development and geographical indications.

Green, circular economy for sustainable solutions- enablers, requirements and solutions

Addressing climate change in the Mediterranean region and at the same time reducing malnutrition requires profound changes in the food systems. Different entry points exist in order to create inclusive markets, accessible to all producers and consumers and to make sustainable, nutritious and diversified food available, accessible, affordable and desirable to people.

Geographical indications (GIs) can represent an important lever to strengthen sustainable food systems by combining different processes at the territorial level. GI systems act as catalysts for sustain-

nability in the long run, as they ensure the continuous use of traditional production, processing and marketing practices and know-how.

Policy and regulatory frameworks should ensure the continuity of GI schemes over time. This continuity can contribute to environmental preservation and social responsibility to encourage local GI communities to engage in long-term sustainability pathways through territorial strategies and by formulating performant GI specifications



Essma Ben Hamida

Activiste du développement, Co-fondatrice et Présidente du Comité Directeur de Enda, membre fondatrice et ancienne présidente de Sanabel, et récipiendaire du prix Schwab de l'Entrepreneur Social pour la région MENA en 2010 et du prix Takreem d'Excellence de la Femme Arabe en 2019.

Challenges, enablers and requirements to apply GCE solutions to SFS, including economic/ fiscal/financial measures

Since 1990, Enda has served more than one million Tunisians, among which 40% are in rural areas. In these areas, Enda offers financial and non-financial services adapted to smallholder agriculture's needs and promotes eco-responsible and resilient agricultural practices.

In order to raise awareness about environmental issues, Enda works closely with the actors of the ecosystem. It has deployed a green strategy focused on renewable energy, energy efficiency, resource management, and integrated and sustainable waste management. The latter gave birth to 2 green products offered at preferential rates: Eco-loan (waste recycling) and Eco-shams (solar pumping), and soon Eco-efficiency (cold chain). Yet, it is crucial to:

- Encourage the financing of green businesses
- Facilitate administrative procedures and access to subsidy mechanisms for eco-entrepreneurs
- Establish financing lines at subsidized rates for MFIs
- Review tax legislation in favour of reinvestment and the development of concrete solidarity and sustainable models
- Initiate an international platform, bringing together climate and responsible finance players to exchange good practices.



Mohamed El Shinawi

Prof. Mohamed El-Shinawi is the Co-Chair of the Partnership for Research and Innovation in the Mediterranean PRIMA. he is in charge of all International relations and agreements in the Ministry of Higher Education and Scientific Research of Egypt. With more than 80 peer-reviewed publications and more than 70 oral and poster presentations worldwide, he is a distinguished professor in the field of breast cancer, trauma, and general surgery.

Setting the scene: green, circular economy - applicability to food systems

Global food insecurity has been increasing since 2014, with Covid-19, climate change and war as aggravating factors. The situation we are currently facing is a dramatic international food crisis. Recent IPCC Assessment Report highlights how vulnerable global food systems are to climate change, the negative consequences of climate extremes on food security, and socio-economic issues, particularly affecting the most vulnerable groups such as women, children, and the elderly. Food systems are re-

sponsible for one-third of global GHG emissions, as well as biodiversity loss and global water footprint. In addition, food systems are also highly inequitable, with 10% of the global population still facing hunger and 65% of people under the poverty threshold working in the agricultural sector.

On top of adaptation strategies such as cultivar genetic improvements, agricultural diversification, digitalisation, precision agriculture, agroecology, and integrated landscape approaches offer a potential way forward to slow down the onset of climate-related disruptions. However, to systematically integrate these strategies and meet the challenge of food security and promote more sustainable Agrifood systems, it is necessary to foster cooperation between all actors, institutional and non-institutional, in a multilateral and multi-actor perspective that invests in the search for synergies, alliances, and long-term partnerships, with adequate investments in innovation, research and capacity development. The experience of the Partnership for Research and Innovation in the Mediterranean Area – PRIMA is illustrative of a successful concrete programme that supports through funding and projects the green transition of the Agrifood sector, sustainable use of natural resources and the valorisation of the Med diet.



Layla Naffa

Layla Naffa is the Director of Programmes at the Arab Women Organization of Jordan; a national NGO advocating for legal and political reforms that catalyze positive change towards gender equality and the empowerment of all women and girls.

Education Background; A holder of BA in English Literature and a Diploma in training teachers

Work Background: Worked as a Teachers' Instructor at UNRWA Teachers Training Institute, in Amman

Experiences: Being the Director of Programmes at the Arab Women Organization of Jordan (AWO), she participated in:

Why should Mediterranean farming systems switch towards SFS through GCE?

Being a women's rights organization and a member of the International Union for Conservation of Nature-IUCN for over 2 decades, The Arab Women Organization of Jordan-AWO has been involved in searching for gender-sensitive responses and Nature-Based Solutions.

Women not only have a role to play in tackling the climate change threats that affect food production but also their knowledge, attitudes and views can better guide the actions adopted toward sustainable consumption - that in turn influences production patterns towards sustainability. Jordanian women are real actors for revitalizing Mediterranean healthy diet. Excluding women from the food systems process and overlooking their needs, interests, and creativity isolates fifty percent of the world and marginalizes potential innovative solutions that can generate environmental and food justice while bridging gender gaps and overcoming gender-specific barriers. AWO seeks to enable community involvement, capacity building, and gender equality as the principal means toward improving food systems sustainability and revitalizing Mediterranean diet through our diverse initiatives. How to enforce the interactions between the economy, society, and the ecosystems for SFS? The role of AWO is in enhancing resilient livelihoods and food security of host communities that received the Syrian refugees in Jordan through the promotion of a green economy and sustainable agricultural development.



Alessandro Galli

Alessandro Galli works as Senior Scientists and Mediterranean-MENA Program Director at Global Footprint Network, analyzing human dependence on natural resources and ecological services through the use of sustainability indicators and environmental accounting methods. Since 2008, Alessandro has been working with government agencies and NGOs in USA, Europe, Latin America and the Middle East. Alessandro has authored more than 50 peer-review articles and acted as reviewer for some 20 academic journals.

Sustainable solutions from the ground: valuable case studies

A growing number of studies has recently identified food systems around the globe – i.e., the way our societies produce, distribute, consume, and dispose of food – among the key drivers of the human pressure on the planet, and food sustainability as a core theme in our societal run-up towards a sustainable future. This holds through for the Mediterranean region.

The significance of food in comparison to other daily activities, and the current sourcing and resource intensities profiles of dietary patterns of Mediterranean countries over the period 2004-2014 is assessed through Ecological Footprint Accounting. Results show that food consumption is the single largest reason (ranging from 22% to 50%) for transgressing the carrying capacity of Earth ecosystems in all but one Mediterranean country. Against a desired goal for short, circular food systems, results also show that food systems in the Mediterranean are rather long (and dependent on resources from outside the region) and linear. We conclude by showing how the food Footprint of Mediterranean residents can be reduced by opting for food products from small scale production systems, and shortening the distance between producers and consumers through short value chains that work for nature and people.



Eduardo Cuoco

Eduardo Cuoco, involved in organic farming since 1998, promoted the organic industry in Italy as an innovation broker and helped co-founding the first Organic District. Since 2008 he is working at IFOAM Organics Europe where in 2016 he was appointed as Director. He is involved in the establishment and management of the European Technology Platform "TP Organics". He is currently participating in different expert groups such as AKIS-SCAR and EMEG. He is member of the board of the "International Technological Innovation Platform for Organic" and member of the Scientific committee of Fondazione Campagna Amica.

Green, circular economy for sustainable solutions- enablers, requirements and solutions

The Farm to Fork (F2F) strategy, an important pillar of the European Green Deal, aims at transitioning towards more sustainable food systems (SFS) in a comprehensive and fair way. Organic is at the heart of the strategy (with a target to reach 25% of organic land by 2030). The F2F strategy aims at tackling climate change, protecting the environment and biodiversity, making sure that Europeans get healthy, sustainable, and affordable food, and guaranteeing a fair economic return.

The EU organic action plan recognizes that "organic farming should be a model to follow" and aims for "a marked increase of the share of organic farming, encouraging farmers to convert, and to expand the accessibility of organic food". Moreover, the European Commission aims to publish a framework law on SFS, the purpose of which is to accelerate and facilitate the transition to SFS and ensure that all foods placed on the EU market become increasingly sustainable.

The F2F Strategy has the potential to lead the agroecological transition in the Mediterranean region. The Strategy will bring a shift to production methods that will impact first the EU MED countries but also the countries of the whole region e.g. through the trade patterns that will be affected by a farming system less export and meat-oriented.



Antonella Autino

Antonella Autino, PhD, since 2014 is the manager of the PRIMA programme. From 2013, she was manager of the Sustainable Development Solutions Network-SDSN Mediterranean, aiming to boost awareness of the 2030 Agenda for Sustainable Development and the SDGs in the Mediterranean region. For 20 years, she has been working in the EU research and innovation field, focusing on agri-food research and in particular on traceability and authenticity.

Sustainable solutions from the ground: valuable case studies

PRIMA Actions: Green Circular Economy a game-changer towards the transition to sustainable Mediterranean food systems.

The Mediterranean food systems are under pressure like never before, with severe implications for the future of ecosystems and food security.

The green circular economy approach, preventing food loss and waste, is a game-changer in the transformation to more sustainability. Providing demonstration of the environmental and economic benefits of circular economy practices will facilitate this transition. The funds projects for a total of EUR 12 million, supporting the development of transdisciplinary, cross-sectoral collaborations to increase the scale and demonstrate the benefits of circular innovations. These projects deploy the circular approach across different value chains, such as reducing the amount of waste generated in the food system, reuse of food, utilization of by-products and food waste, and nutrient recycling.

Among them, the DAINME SME project turns a by-product of the dairy sector (whey) into a high-added-value product (bioactive compound); MEDISMART developed a solution to improve the shelf life of perishable products through bio-coating obtained from fruits while SIMTAP project demonstrates the value of circular farming systems facilitating the recovery and reuse of inputs and resources.



Vito Intini

Vito Intini is the Regional Chief Economist and Inclusive Growth and Sustainable Finance Team Leader at UNDP in the Arab region. Prior to this position, he was the Senior Macroeconomic Adviser at UN DESA in NY. Before, Vito worked at UNCDF where he led the global program on Municipal Finance. Earlier, he was the Chief of the Economic Governance Section at ESCWA in Beirut. Vito was also a Private and Financial Sector Specialist at the World Bank in the Balkan region. He also worked for OECD, OSCE, EU and the academia. He has also been a Fulbright visiting fellow.

Food security in the Arab States Region in light of recurrent shocks

The war in Ukraine along with the sanctions imposed on Russia are having a significant impact on many economies around the Arab States region due to many concomitant factors.

These factors are contributing to an economic slowdown of oil- and food-importing countries and, in the case of the most vulnerable countries, to the risk of stagflation further weakening the post-COVID recovery right when governments were starting to withdraw their often over-stretched fiscal support measures. This may quickly translate into higher public debt for vulnerable economies.

The Arab States region has been impacted by this latest crisis, which is just the last of a series of crises that include the food crisis of 2007/08, the uprisings that started in 2010/11, the oil price shock of 2014, the latest cycle of uprisings of 2019, and the pandemic, along with accelerated climate-related shocks.

The presentation is organized as follows: section 1 analyzes key and broad socioeconomic aspects that are likely to be exacerbated; section 2 analyzes the potential food security and poverty outcomes; section 3 analyzes the potential unequal impact of the recent inflationary pressure by using primary household data; section 4 reviews the policy and programmatic measures adopted by selected Arab States and the international community; and section 5 provides key policy and programmatic recommendations.



Fatima Zahra Zerouati

Bio Fatima Zahra Zerouati

How to promote and broadcast “GCE for SFS”?

The health crisis accelerated reflections at all levels, it is now questioning the growth model - not only to strengthen the productive bases of agriculture, but also to rethink food sovereignty and security.

In order to continue to guarantee the availability and accessibility of food supply, the need for new sustainable and resilient production models is essential.

This food sovereignty is acquired by producing locally, reclaiming the ancestral agronomic heritage which had been able to take advantage of often fragile resources, valuing circular peasant technical practices and know-how; and counting on the commitment to reduce negative environmental impacts. It is necessary to determine the place of GCE in the national and local economies through the development of new regulatory and fiscal frameworks in favor of circular economy, to develop a logic economy of functionality in public procurement as well as to establish territorial competitive mechanisms.

The change is based on science but above all on populations involvement, linking food value chains with consumers of new products from the circular economy, and on multidimensional communication - namely popularization, publicity, scientific and socio-economic debates and portraits of successful experiences.



Philip Mikos

Philip Mikos. Italian agro-economist. EU Delegations in East Africa for 10 years, then in charge of EU policies in food security, RD and environment at HQ. In 2011, he took over regional programmes in the East Neighbourhood. In 2014 appointed Head of Cooperation in Morocco. Since January 2021, Head of EU relations with North Africa in DG NEAR.

Setting the scene: green, circular economy-applicability to food systems

The EU and the European Commission have taken commitments at the highest level to foster the green transition and circular economy. Under the co-chair of DG NEAR the two UfM Ministerial meetings devoted to environment made an urgent call to address the multiple climate and environmental challenges facing the Mediterranean region . In parallel the European Commission has been implementing a series of initiatives to tackle these issues. Stemming from the European Green Deal, several measures have been deployed. The Farm to Fork strategy seeks to make food systems more sustainable throughout the value chain, curbing food losses and waste and improving sustainability of food at all stages – production, consumption, processing and distribution.

The external policy instruments have equally contributed to deploy the EU climate policies in our cooperation with the Mediterranean region where we are helping our Southern neighbours to achieve their climate and environmental objectives. The EU Economic and Investment Plan for the Southern Neighbourhood establishes several flagships to support sustainable economies, including sustainable

food systems, agriculture, and rural development (Flagship 12 multi-country approach and focus on Morocco). These Flagships translate into numerous projects, both bilateral and regional, and of course concrete investments.



REINFORCING THE INTER-RELATIONS BETWEEN MEDITERRANEAN AGRICULTURAL HERITAGE AND FOOD HERITAGE FOR SUSTAINABLE DIETS AND FOOD SYSTEMS

Moderator: **Parviz Koohafkan**, President, World Agricultural Heritage Foundation

Rapporteur: **Andrea Ferrante**, Schola Campesina

Objective: to enhance Dynamic Conservation of the Mediterranean Agricultural and Food Heritage Systems through labelling and certification of products and services and contribute to a Change of Route for the revitalization of Mediterranean family agriculture and sustainable food systems.

In all parts of the world, traditional food systems constitute a significant part of diets, food heritage and culture. In 2013, UNESCO declared the Mediterranean diet and the Japanese traditional diet (Washoku) as World's Intangible Cultural Heritage, thereby giving global recognition to the health protecting nature of these diets. Descriptions of these two regions diets indicate that they are characterized by diversified agroecosystems with rich and often unique agrobiodiversity with high intakes of diverse varieties of vegetables, fruits, legumes and cereal grains but also recording the long-life expectancy in these regions.

It is not clear from available information what percentage of the Mediterranean population depends on their traditional food system for their food needs. Anecdotal evidences suggest that a significant percent of the rural population still depend on their traditional food systems for their food needs particularly in rural areas of the Southern Mediterranean countries. Many of the traditional food systems are maintained by local communities who retain knowledge of the agroecosystems and food resources rooted in historical continuity, local knowledge and social organization leading to strong food cultures within their region of residence, and include traditional foods through local farming or wild harvesting. Traditional Mediterranean food systems are often adaptive and nutritionally rich and diverse, are local and biodiverse, are subsistence and risk averse, and are socially and culturally rooted.

Many Rural communities in developing countries that continue to grapple with serious development problems still cherish their culture including their food systems which are indeed their intangible natural and cultural heritage. Protecting, revitalizing and promoting these food heritage Systems and their documented health giving attributes would contribute significantly to food security, healthy diets and Sustainable Development Goals.

The Globally Important Agricultural Heritage Systems (GIAHS) programme, which was launched in 2002, has already laid the foundation for pursuing the issues of recognizing traditional food systems as food heritage. The overall goal of GIAHS initiative was to identify and safeguard outstanding and diversified traditional agricultural heritage systems rich in biodiversity, indigenous knowledge and cultural values and their associated landscapes thereby enhancing the benefits that are derived through their conservation and sustainable use. Celebrating traditional food systems as national and global heritage gives utmost recognition and support to the custodians of these food systems who are often the small holders, family farmers and indigenous communities.

Between 2011 to 2021, many Globally Important Agricultural Heritage Systems (GIAHS) were identified and designated both in Northern and Southern Mediterranean countries by FAO and many others qualify such designation.

In this session, it is suggested to enhance the Dynamic Conservation of Globally, Nationally and Family Agricultural Heritage Systems (GIAHS, NIAHS and FIAHS) and related Food Heritage in Mediterranean Region and the labelling and certification of related products and services by expanding community food base, diversified food and nutrition intakes of populations to ensure improved nutrition and healthy diets.

The Change of Route includes the creation of a Mediterranean Agriculture and Food Heritage Partnership Initiative for the revitalization of Mediterranean family agriculture and sustainable food systems based on the experiences of GIAHS around the world and capitalizing on its achievements, networks and potentials along with a feasibility study to be implemented in selected Agricultural Heritage Systems in Mediterranean countries reviewing the GIAHS concept extended to traditional food, nutrition, culinary and curative (medicinal) systems with the goal of recognizing their Food Heritage and supporting income generation activities by labelling, marketing and certification of Mediterranean food heritage and agrotourism certification schemes.

MODERATOR:



Parviz Koohafkan

Dr. Parviz Koohafkan, is the Founder and President of the World Agricultural Heritage Foundation (WAHF) and Professor at Beheshti University in Iran, Nanjing University in China, Senior Research Fellow in RIHN, Japan and Honorary Research Fellow at Bioversity International in Rome, Italy. He held several Senior positions in FAO including the Director of Land and Water Division and the Task Manager of chapters of Agenda 21 in FAO and established the UN Partnership on Dynamic Conservation of Globally Important Agricultural Heritage Systems (GIAHS, WSSD, 2002).

RAPPORTEUR:



Andrea Ferrante

Coordinator of Schola Campesina Aps (an International agroecology school located in Italy). Agroecologist, over 20 years experience on food and agriculture policies and rural development. Extensive experience in working with and supporting small-scale food producers organizations.

PARTICIPANTS:



Alireza Khosravi

Alireza Khosravi is a sustainability specialist, researcher and author in the field of Energy and Environment, collaborator of CIRPS and lecturer of Agricultural Economics and Sustainable Development. He has PhD in Energy and environment from La Sapienza University of Rome, Italy.

The resiliency of Mediterranean diet that helps fighting climate change (Energy transition of Traditional Cooking)

The Mediterranean Diet recognized not only as a set of healthy food names but also as a culture, lifestyle and a sustainable food system. Having said that importance, The Mediterranean Diet is included on UNESCO's Intangible Cultural Heritage and Humanity list. But in the recent decades, majority of investments in north African countries are being made on the development of resource intensive farming methods while its environmental impacts, resource scarcity and the reality of climate change caused the increase of abandonment of traditional and small-scale farming practices, livestock and fisheries that are subjected to produce more than 80% of sector production. But these impacts are not limited to the agricultural production itself including cultivation, harvesting and hence the landscapes but indeed its cultural aspects including the sustainability of lifestyle and food culture related to the traditional extensive farming communities also need to be preserved to ensure the sustainability of Mediterranean Diet as a sustainable food system on long run, particularly people those who are living in rural areas and less developed countries in southern neighborhood of Mediterranean Area are more in need of more investment, supports and solidarity. On the other hand, in the recent years, climate change was already on the political agenda of international organizations and governments and politicians often focused on the energy sector to mitigate this change and deal with challenge as macro priority, whereas protecting extensive traditional agriculture, food culture and the quality of life in the community have received little attention. So, emphasizing that the acknowledgement of the Mediterranean Diet as a sustainable diet needs the development of new cross-border intersectoral approach to demonstrate further the synergies among nutrition, biodiversity and resource sustainability including the role of Energy Transition for the benefit of present and future generations.

This presentation is going to explain why and how the traditional Mediterranean diet, including the seven species (whole grains, fish, wine, pomegranates, figs, walnuts and extra virgin olive oil) in synergies with additional Mediterranean fruits and lifestyle adaptation that involves increasing physical activity and organized meals from farm to fork, together with healthy food choices, is consistent with the traditional Mediterranean Diet and it must remain as a core in the framework of Energy Efficiency Modelling and Energy Transition Process of Agricultural Sector in Mediterranean Area. Healthy, Fresh and rich foods that are included in the Mediterranean Diet is like another food systems have a wide variety of cultural and heritage connections to the areas where they have grown and it has value in different dimensions to the people who live in the area and consume it. So the transition towards resource efficient and low-carbon economy to achieve a sustainable growth in Agricultural sector that creates equal economic opportunities for everyone particularly for those who are living in the rural area, improving social, environmental and governance conditions of the communities needs adopting inclusive policies that include the importance of supporting culture, tradition and values not only at Macro level but also at social relations at Micro level.



Hasrat Arjjumend

Dr. Hasrat Arjjumend is the Founder President & CEO of The Grassroots Institute, Montreal (Canada). He is also associated as a Senior Legal Research Fellow with the Centre for International Sustainable Development Law (CISDL), McGill University, Montreal (Canada). He is Executive & Managing Editor of the Grassroots Journals published by The Grassroots Institute

Food and Nutrition Security by Mobile Pastoralists in the Mediterranean Region: Challenges of Revitalizing Pastoralists' Heritage

Mediterranean food systems represent an array of food and nutritional security, which strongly relies on animal proteins and fats. This paper will explore the contributions made by mobile pastoralists to the food and nutritional security in the Mediterranean countries, and their challenges to survive and preserve the heritage of pastoralism.

Evolved as socio-cultural and biocultural diversity heritage, the mobile pastoralism involves transhumance across extreme environments while herding animal flocks for accessing and exchanging products and services, seizing ecosystemic opportunities, and evading animal diseases or other risks. About 26 million km² of land (nearly 25%) worldwide are under managed-grazing systems engaging about 120 million pastoralists/agro-pastoralists worldwide, with about 31 million in southern Mediterranean region. At present, people in the developed world obtain 27% of calories and 56% of protein from animal sources. According to an estimate, livestock products contribute 17% calories and 33% protein globally to the world's diets. FAO data indicate that human-edible protein from livestock is produced much more efficiently where the sector is dominated by pastoralism. This highlights the comparative advantage for livestock production in pastoral systems over intensive industrial livestock production. Sheep and goats provide milk being used as fresh milk, sour milk, yoghurt, ghee, cheese and "Jameed" (Beduin-Jordanian food made from goat milk). Cattle provide milk being consumed fresh or used to produce ghee and sour milk. Camel's milk is consumed fresh and as sour "Qaress". Nevertheless, sustainable livestock production (such as through mobile pastoralism) is able to provide enough animal products for healthy human diets (with high-quality protein), especially when red meat has received health risk alerts. Animal food quality is another important aspect. Evidently, mobile livestock is less affected by animal diseases. Livestock, especially local/native breeds, reared in the open air and fed on natural pastures is more likely to be fit and resistant to diseases. As a result, the meat, milk and other derived products are of high quality, more secure, and healthier. Evidences exist that pasture-fed animal products consistently yield a better nutritional profile: healthier lipidic composition, higher content of polyunsaturated fatty acids (PUFAs) or conjugated linoleic acids (CLAs), or higher Omega 3 content (better Omega 6/ Omega 3 balance), low iodine content, etc.

In Mediterranean ecoregion, pastoralism has played a key role in shaping arid and mountainous landscapes characterized by highly unpredictable rain patterns and high climatic variability. In southern Mediterranean, livestock trade and marketing are also important economic drivers, as the demand for animal protein consumption has grown steadily since the 1960s. In Mediterranean region, small ruminants (sheep, goats) mostly compose the livestock, along with certain proportion of cattle, equines and camels. For example, in Greece, out of 20 dairy-farming products (cheeses) 18 are made of sheep and goat milk. Likewise, meat production in southern Mediterranean increased from 5 million metric ton in 1983 to 15 million metric ton in 2020. Similarly, milk consumption was 223 million metric tonnes higher in 2020 compared to 1993. However, we see stark differences in southern Mediterranean (mostly arid and plateaus landscapes) and northern Mediterranean (mostly highland landscapes) where number of livestock has increased in the former and decreased in the latter. In southern Mediterranean, livestock population (cattle, camels, sheep, goat), especially small ruminants, has got more than doubled in 40 years (from 1967 to 2007) counting from 207.5 million heads to 430.3 million heads. Economic reasons, human population growth, oil wealth, advancing urban life, policy favours, subsidies, and higher per capita consumption are certain reasons behind this scramble. On the contrary, northern Mediterranean countries, such as Greece, Spain, Italy, France, etc. witness a decline in population of sheep and goats. For example, sheep in Italy decreased from 1.1293 million heads in 1985 to 0.7285 million heads in 2016. But the average sheep farm size has increased between 1990 and 2020, which means intensification process has gained momentum under various complex reasons including EU's Common Agriculture Policy. Scientific research indicates that when industrial livestock production has increased by 4.3%, mixed farming and extensive livestock grazing have increased 2.2% and 0.7%, respectively, reflecting that the preference is given to the openly grazed animals for meat consumption.



Stefano Grego

Stefano Grego from 2000 is a full professor in Agricultural Chemistry at the University of Tuscia in Viterbo. He has been Pro Rector Vicario from 2001-2008 and Pro Rector with responsibility for International Relations from 1998 to 2014. In 2007 he was awarded by the President of the Italian Republic of Commendatore as recognition of his work as a researcher and teacher. In recognition of his scientific activity he obtained 4 Degree Honoris Causa from European Universities. He is among the founders of World Agricultural Heritage Foundation.

Multi functionality of olive tree

The olive tree is a fundamental plant for the peoples of the Mediterranean, able for millennia, with its influence, to shape the landscape, culture and traditions. No other plant, with the exception of wheat, has had the same importance in the history of our species as the olive tree, capable of influencing nutrition, culture and religion and contributing to the birth of modern Mediterranean civilization. The unmistakable gnarled and curved branches of the olive trees have shaped the Mediterranean landscape and their fruits have provided sustenance to numerous civilizations, from the Middle East to Greece, from Italy to Spain.

“There are two liquids that are particularly pleasing to the human body: inside the wine, outside the oil”, wrote Pliny the Elder in his famous treatise Natural History. The olive tree and olive oil have always seemed to instill in the observer a sense of the sacred. It is no coincidence that they play an important role in the three monotheistic religions of the Mediterranean, Judaism, Christianity and Islam. The traditional Mediterranean diet, declared an intangible cultural heritage by Unesco in 2010, is a millennial heritage, the result of the intersection between the peoples and cultures of the Mediterranean basin. The term “diet” derives from the Greek word “diáita”, which has a more holistic meaning than what we attribute to it today, and indicates a “way of life”, “regime of life”. The Mediterranean diet, of which olive oil is an essential element, represents a lifestyle in constant evolution, a promoter of integration and sharing capable of fostering dialogue between different cultures and societies.



Samira Nefzi

For 20 years, Ms. Samira Nefzi has been responsible for environmental assessment and reporting within the Tunisian Observatory for the Environment and Sustainable Development, dealing with cross-cutting issues related to biodiversity and ecosystems, soil resources as well as than climate change. Ms. Nefzi is a member of the Tunisian National Council for the fight against desertification, the National Committee for monitoring the implementation of the SDGs as well as the National Advisory Committee for Adaptation to Climate Change. She is also member of many scientific national councils.

Tunisian Diet, from healthy to unhealthy, time to react

The mediterranean diet has been recognized by the international community for its good impact on health and lifestyle benefis.

It's is based on cereals (wheat and barley) with a high intake of vegetables, legumes, fruits and fish. The central element is olive oil, very rich in monounsaturated acid (oleic acid) and polyphenols. Consumption of meat, eggs and milk is very low. The diet is rich in unsaturated fatty acids and antioxidants. Tunisia has been known since antiquity for its authentic and spicy dishes.

These dishes were generally prepared in a traditional way from local products. some differences distinguished them from north to south linked mainly to the climate and the type of agriculture practiced. The proximity of the sea had also an impact on the diet, especially with regard to fish consumption.

However, since the 90's, the Tunisian diet has changed from a Mediterranean diet to “European” or even “international” diet, the profile of which is no longer clear. Urbanisation and media are the principal causes of this transformation.

Bad eating habits have settled in families, traditional dishes have been largely abandoned and new habits have taken place. a very significant increase in the consumption of eggs, meat and milk and dairy products was then recorded.

Formerly based on self-consumption and traditional products, homemade with natural production and conservation techniques, the Tunisian diet is nowadays structured around elaborate industrial products, purchased from supermarkets. Fast food were also strongly influenced the tunisian diet and certainly the tunisian health.

Today tunisians are reaping the benefits of the transformation of their diet. Important illnesses have taken hold in Tunisian society. Hypertension and diabetes (in 2019, 20% of Tunisians suffer from diabetes), one in 3 adults has a prevalence of high blood pressure and the prevalence of obesity is around 34%.

Despite an increase in life expectancy, these pathologies denote a qualitative deterioration in our state of health following an unbalanced diet. The abandonment of acquired bad eating habits and the return to a Mediterranean type diet is more than desirable in order to preserve the health of our fellow citizens and the national economy.

Today, in a context of climate change, resilience must include the resilience of Tunisian health and the return to balanced nutrition seems to be the ideal gateway for this paradigm shift that everyone is talking about. Sustainable consumption and production patterns must reposition the Mediterranean diet at the heart of the Tunisian diet.

The change in behavior should be accompanied by agriculture reforms aimed at meeting the “healthy” food needs of Tunisians, encouraging healthy agricultural production, improving incomes and optimizing the use of resources. Improving value chains is an effective avenue to explore in order to promote local products and improve farmers’ income. Many initiatives have emerged in Tunisia mainly affecting local varieties of cereals, fruits or food products authentic to Tunisia. Controlled designation of origin “AOC”, organic products, promotion of local products, education and raise awareness are tools actually developed in Tunisia to flip to healthy foods.



Kazem Vafadari

Bio Kazem Vafadari

Food Heritage and Tourism the role of Mediterranean Diet

The role of food in human history and culture is significant. The type of food and food culture is highly depending on geographical locations and agriculture systems and landscapes. Humans have developed their diet and food system over years which became part of their identity and culture. Consequently, traveling is associated with food and it plays an important role as a tourist attraction. Gastronomy and Food tourism is one of the main travel motivation and Mediterranean diet has a special position in global travel market. This research has a close look at agriculture heritage systems and food culture to analyze the role of food system and gastronomy tourism in community development and resiliency. It concludes that food tourism has a significant role in sustaining traditional agriculture and agriculture heritage.

This study focuses on food system of Japanese traditional landscape of Satoyama and Satoumi that support Japanese healthy diet and tourism applications of Satoyama landscape. More than half of Japan is covered by Satoyama landscapes that form Japanese rural traditional landscape and have been providing more than half of the county's food consumption in the past. However, the importance and attraction of Satoyama lifestyle and food system has been declining due to aging society, industria-

lization and rapid depopulation of rural Japan. This inconvenient fact made Japan a big consumer of international food market. In fact, Japanese traditional landscape and agriculture heritage capacity is not used and increasingly is being abundant.

In Europe, situation is similar in case of ageing population in rural areas. However, the role of meditating diet as heritage and tourist attraction is very important. European Food production and agriculture heritage landscapes are attracting tourists from Japan and other courtiers. Tourism contributes to rural economy and help with diversification of traditional farming livelihood. Lessons of food tourism in rural areas in Mediterranean region is to be shared through a comparative study of food tourism in form of village tourism and farm tourism in Europe and East Asia. The united nations FAO'S program of Globally Important Agriculture Heritage (GIAHS) landscapes in both sites are selected as case studies. The lessons and applications include community resiliency and development both in east Asia and Europe.



Thomas Louis Price

Bio Thomas Louis Price

The Mediterranean Diet: nexus of knowledge, sustainability and innovation

Reference to the wonders of the "Mediterranean Diet" have become a mantra in popular culture, public health and consensus on healthy, nutritious diets. Research supports these images of the positive benefits of the diet, and the important place of the underlying farmer-developed agricultures and food systems. These systems are millennial, as the foods and agroecosystems have evolved over centuries. Terracing, irrigations systems, emblematic tree species (including olive, almond and walnut) and unique terroir foods demonstrate inter-generational ingenuity, investment and preservation of natural capital. At the same time farmers and their communities have developed intensely adapted systems and solutions to distinct, localized challenges that are dynamic, adapting to multiple pressures and opportunities over time. The presentation will review both diversity and the centrality of local culture and knowledge as ways forward for these precious Mediterranean repositories of humankind's healthy foodways and sustainable rural practices.

Evidently there is a wide range of "Mediterranean" systems and diets, encompassing a diversity of ecologies, food systems, cultures and societies. Other panellists will address some of the commonalities of production and products, such as olives, vegetable oils, fruits, vegetables, beans, fish and the results of traditional fermented, salted, dried and other food processing methods.

The evidence of factors of transformation and heavy pressure are evident as well as continuities in products and farming systems: urbanization, industrialization of agriculture, loss of food awareness and food preparation practices, water scarcity and ecosystem changes across the region.

The presentation will particularly highlight positive examples and factors for the future:

- Production has continued to be a mix of both family-farmed and industrial agriculture, with some countries retaining a strong, localized farmer base
- Awareness of the health values of the diet and the components of the diet stimulate transitions from local traditions in foodways and food systems to new urban and renewed discoveries for Mediterranean foods
- Innovations are addressing the challenges to farms, farming and markets: preserving and sharing of crop varieties, irrigation methods using new technologies accessible at the small farm level, new processing methods, (re)invention of organic farming

- Family farmers are marketing directly to (urban) consumers
 - Recognition of farmers as both stewards of ancient knowledge and partners in invention and application of knowledge, are exemplified in new forms of education, rural extension and recognition as "farmer scientists"
 - There is hope for future viability and sustainability of farms and their landscapes, for example as urban youth discover family farming in Italy (with policies of public support, financial and institutional)
- The conclusion will focus on the way forward with thoughts on the sustainability of small-scale farms as the foundation for reinventing "the Mediterranean Diet".



THE ROLE OF SMALLHOLDERS AND FOOD BUSINESS IN ENHANCING SUSTAINABLE AND HEALTHY DIETS

Moderator: **Angelo Riccaboni**, Chair Prima Foundation

Rapporteur: **Giovanni Stanghellini**, Prima Foundation

Objective: to highlight the role of farmers and businesses in implementing the MED Diet, assessing and promoting more just, environmentally friendly, profitable, healthy and secure food systems

Agri-food systems are at the center of the global debate on sustainable development, for their impact on climate change, CO2 emissions and biodiversity loss, for the importance that food security is assuming worldwide, for the spread of obesity and malnutrition, and for the effects of it on the well-being and health of individuals and societies. The recent geopolitical crisis occurring in Ukraine confirms the relevance of this sector, from an economic, social, humanitarian and strategic standpoint.

In the path towards more sustainable agri-food systems, companies can play a central role, adopting production and distribution models that are more attentive to the use of environmental resources and social equity, promoting dietary patterns in line with sustainable diets. The Mediterranean and the MED diet constitute a case in point, where it would be interesting to engage with the smallholders and companies to call upon them to take responsibility in adopting more sustainable institutional, economic, social and environmental practices. If there is no doubt that companies' behaviour might have negatively impacted on some of the current problems, the very same sector can also be part of the solution.

Large companies have already grasped the importance of this evolution. On the other hand, smaller companies are less committed to this process, with the risk of losing market opportunities and competitiveness. At the same time, precisely the smallholders and small companies are the backbone of the productivity system of several Mediterranean Countries and economies. To avoid sustainability being seen as a burden, instead of an opportunity, it is necessary to start with the promotion of the grammar of sustainability in smaller companies. That is to make them understand what sustainability means for agri-food companies, how to introduce it into operational activities, how to monitor it and how to communicate it. This evolution, as it can benefit the environment and society, could also benefit the companies themselves, in terms of new market opportunities, financial resources, better relations with stakeholders and regulators.

Perceptions around sustainability performances' measurement and reporting have also evolved significantly. While years ago this type of performance was considered as a not very common, today, the alignment to sustainability is an act of leadership and an expected conduct. The establishment of accounting and sustainability reporting mechanisms, meant to assess the alignment of companies' practices to SDGs and related targets, has played a positive role in pushing companies to improve their behaviours, also triggering sustainable investments for economic growth.

Therefore, the issue of how to assess business practices becomes crucial for the future of the food sector. The current debate around food systems has clearly shown that the global objective cannot be achieved independently of the different local contexts where citizens, businesses and consumers live. In particular, the G20 Agriculture Communique has clearly stated that there is no one size fits all strategy to promote sustainable food systems. On the contrary, the appropriate implementation of the strategy shall also bear in mind and adequately valorize the cultural, traditional, and historical

elements. If not, we might experience the risk of universalistic measurements unable to value adequately the local production systems.

The seminar will investigate how key aspects such as short chain production, virtuous connections with the territories and communities, stable and positive relations between consumers and producers can favor a model of food production, which is sustainable, healthy, and profitable and how adequate measurement systems can respect and valorize this model.

MODERATOR:



Angelo Riccaboni

Angelo Riccaboni is a Full Professor of Business Administration at University of Siena. He is co-chair of SDSN EUROPE and member of the UN SDSN Leadership Council. He chairs the Fundación PRIMA. He is president of the Steering Committee of Santa Chiara Lab, co-chair of the DNF Observatory. He is the coordinator of the SDG2 Working Group of ASviS, member of the Scientific Committees of the Institute for Sustainable Development Goals of Tsinghua University, of CSR Manager Network Italia, of World Farmers Organisation, and of Board of Directors of Bicocca University of Milan. He has been Rector of the University of Siena.

RAPPORTEUR:



Giovanni Stanghellini

Giovanni Stanghellini is Project Manager at the Italian PRIMA Secretariat, responsible for Institutional Relations, regularly interacts with relevant stakeholders and major institutions. He is actively involved in the Euro-Mediterranean Program PRIMA, dealing with the food and water sector. Currently he is focal point for several initiatives and activities on sustainable development, the PRIMA Initiative, the SFSMED Platform, and COP27.

PARTICIPANTS:



Peter Schmidt

A trade unionist in the food sector for 27 years, Peter Schmidt joined the EESC's Workers' Group in 2014 and is currently the President of the Agriculture, Rural Development and Environment Section. He has been the rapporteur of several EESC opinions on sustainable food systems.



Arianna Giuliodori



Paolo Mascari



LAND USE PLANNING FOR COPING WITH IMPACTS OF WATER SCARCITY AND LAND DEGRADATION ON MEDITERRANEAN FOOD SYSTEMS

Moderators: **Pandi Zdruli**, Senior Research Scientist, CIHEAM-Bari
Feras Ziadat, Land Resources Officer, FAO
 Rapporteur: **Siad Si Mokrane**, CIHEAM-Bari

Objective: to deep into the problems, challenges, and solutions. It will show and document that land and water scarcity could be better managed through efficient use of irrigation water and implementation of innovative irrigation systems and sustainable land use planning.

Why this session?

Mediterranean region is best characterized with the scarcity of fertile land suitable for crop production (14% region wide and 5% in Middle East and North Africa (MENA) and in extreme cases such as Libya this percentage is less than 2%). Several studies for the MENA region show that only about 0.21 ha/per person is suitable for farming. Water is the other limiting factor for crop production. Nevertheless, agriculture remain the major user of water with more than 85% in the MENA despite only 35% of the total agriculture land is irrigated.

Small-scale family farming provides more than 80% of crops and livestock products and 75-85% of agricultural land holdings are held by family farmers. They face daunting challenges including rainfall variability, water shortage, a rise in drought frequency, land degradation and desertification, and increased infections from pests and diseases. These factors are further exacerbated by inadequate support from authorities and institutions, weak market infrastructure and integration, as well as limited access to innovations and new technologies. Finally, these impacts are reflected in decreased agricultural productivity and reduced livelihood opportunities which in turn escalate a cycle of poverty and food and nutritional insecurity, especially in the least developed countries. The increased migration to urban areas is impacting agriculture in the rural areas and is putting more pressure on food production in the rural areas. Therefore land use planning is crucial to enhance synergies on food production and accessibility across the rural-urban areas continuum.

Agriculture production is dominated by the rainfed system that is typical for the arid and semi-arid areas that annually receive less than 400 mm of precipitation. They represent 85% of the total land area of MENA but are crucially important for the livelihoods of around 60% of the total population. It is paramount therefore that sustainable land and water management becomes a priority not only for the MENA but for the whole world. Data show for instance that even the Northern Mediterranean EU countries are facing severe problems of land degradation and desertification that are already being amplified by the impacts of climate change.

Approach:

This session will deep into the problems, challenges, and solutions. It will show and document that water scarcity could be better managed through efficient use of irrigation water and implementation of innovative irrigation systems. These will be done by describing results deriving from projects that were able to make the difference through a combination of innovative technology and participatory approach involving all stakeholders, farmers in the first place.

Then will describe with concrete examples the important role of research to tackle land degradation and desertification (LDD). This will be done by addressing the human- and climate-induced threats, through deeper scientific knowledge and better environmental monitoring that would allow researchers to improve their assessments of the status of the LDD drivers of and trends and to propose innovative sustainable land and water management (SLWM) and ecosystem restoration solutions.

However, all of the above could not be reached without sustainable land use planning. There are too many competing interests for land in the region (especially in the urban-rural fringe). Just to mention urban sprawl especially along the Mediterranean coast. Above all, if the trend of soil sealing and land take at the expense of the fertile soils will continue this will put enormous pressures to the food systems, especially in the MENA region that relies extremely on food imports. Egypt is the largest world importer of wheat and the war in Ukraine could make the situation much harder. A detailed overview of principles of land use planning and the toolbox prepared by the FAO will be shown and documented also with a case study from Morocco.

Major contributions to the 3d International Med Diet conference:

- Document that land and water management is possible if all the actors are involved, and the right policy framework is drafted and implemented
- Provide concrete solution of best sustainable land and water management and land use planning in support of sustainable food systems
- Describe the important role of research as a lever for improved natural resources management and sustained crop productivity
- Support knowledge sharing and dissemination among all stakeholders and increase institutional and capacity building for land, water, and food security

MODERATORS:



Pandi Zdruli

Prof. Dr. Pandi Zdruli is a native of Albania and Senior Research Scientist with CIHEAM Bari since 1999 where he teaches soil science and natural resources management. Before he was Visiting Scientist with the EC's Joint Research Centre at Ispra, Italy, Senior Fulbright Research Scholar at USDA NRCS in Washington, D.C. and Head of Pedology Dept. at Soil Science Institute of Tirana in Albania



Feras Ziadat

Land and Water Officer (FAO), focusing on land resources planning tools and approaches to support integrated land and water management, participatory land use planning, and sustainable land management. Formerly a senior scientist at ICARDA and an associate professor at the University of Jordan. Chair of the UN Coalition on Combating Sand and Dust Storms.

RAPPOREUR:



Si Mokrane Siad

Si Mokrane Siad is a Water Management Modeling Expert at CIHEAM Bari and a researcher in Natural Resource Management and Development, with a particular interest in environmental system modeling and model coupling with emphasis on satellite data products applications.

PARTICIPANTS:



Eddy De Pauw

Eddy De Pauw holds a Ph.D. in Soil Science from Ghent State University, Belgium. Having previously worked between 1975 and 2011 as Technical Officer for FAO, Soil Research Coordinator for IBSRAM and GIS Unit Head for ICARDA, he is currently professionally engaged as international consultant advising on matters related to climate and land resource mapping, and land use planning.

Integrated land use planning: a key principle for optimizing the sustainability of Mediterranean food systems

The Mediterranean region shows great variation in climatic conditions, landforms, soils, and cultural traditions resulting in diversified land use systems. The latter are currently under threat due to climatic change, environmental degradation, socio-economic pressures and changing food habits.

There is a growing realization that to optimize the region's food systems more attention has to be paid to 'integrated land use planning', a concept that emphasizes the modern trends in land use planning: optimization of land use across different parts of a landscape, negotiated resolution of stakeholder interests including land tenure, drawing on multidisciplinary and local expertise, and combining different technologies and tools.

In this context, FAO, in collaboration with CIHEAM Bari, commissioned an updated version of its 1993 Guidelines for Land Use Planning. In analogy with the former guidelines, the update follows a step-based approach: (1) initiate the land use planning process, (2) identify the people with an interest in the land use question, (3) establish a multidisciplinary task force, (4) characterize the land, its uses and users, (5) assess environmental, economic and social impacts of the proposed land use change, (6) negotiate suitable and acceptable land use options, (7) prepare the land use plan, (8) implement the land use plan, (9) monitor and revise the land use plan. In the description of each step a similar format is followed: whose responsibility is it, what key questions need to be answered, what are the main activities and deliverables, and what technologies and tools can be useful.

The new guidelines also provide a toolbox of different categories of tools to assist the integrated land use planning processes, at which planning stages they can be useful, as well as their strengths and weaknesses.

It is particularly through the integrated use of classical and modern tools, such as PRA, land suitability assessment, GIS, remote sensing, modeling, climate change projections that integrated land use planning can be of benefit to the sustainability of the Mediterranean land resource base and its users.

Keywords: Integrated Land Use Planning



Hammou Laamrani

Holding a PhD in Environment and Water Sciences from Copenhagen University, Denmark. Researcher at Agronomic and Veterinary Institute, Rabat, Morocco. Researcher at International Water Management Institute, Ghana. Senior Programme Office at Canadian- IDRC, Environment and Food Security programmes, Egypt. Senior Advisor on Climate change and water in MENA, GIZ. Senior Expert, Water- Energy-Food and Climate Nexus, at the Economic Sector, League of Arab States, Egypt. Currently, Economic Affairs Officer, UN ESCWA, NAFS programme, Lebanon.

Land Use Planning for Coping with impacts of Water Scarcity and Land Degradation on Mediterranean Food Systems Presentation: Water scarcity and food security interconnections of the Mediterranean

The fact that water scarcity, land use/ land management, and subsequently water and food insecurity in MENA region are not sustainable, is no news for the policy makers, the farmers, development practitioners and researchers. The presentation intends to focus on key feasible solutions to plan for and finance policies and programs to reverse the alarming trend and to achieve sustainable land and water management and stability of the food systems under climate change and other external shocks.

Water resources depletion in quantity and quality, the shrinking agricultural land due to urbanization, and weak enforcement or non-pertinence of land-use policies, compounded by recurrence of episodes of drought and erratic patterns of precipitations are making food production in the region unpredictable and vulnerable to changes in global food supply chains.

Thus, the analysis takes a fourfold approach to respond to and be prepared for more scarcity to come, less per capita share of land and water, the growing gap in food supply-demand and costly investments in the future, in case no-action is taken today. Policies, institutions, governance and science are yet to be geared up proactively to mitigate the risks of insecurity in water-land and food and nutrition systems.

The central hypothesis of the analysis is that water and land scarcity and their implications on food security requires an integrated response from different stakeholders, with adapted scales and across-sectors. Illustrative evidence will be shared on the following pathways:

- Planning to prepare and respond to mega-trends, Rural-Peri-urban and Urban ecosystems as a dynamic and connected system taking into consideration demographic changes, changes in diet, structural changes in farming community and practices in land and water management.
- Improving efficiency in use and productivity of land and water through economic instruments coupled with reduction in loss and waste, preservation of ecosystems and social equity and justice. The transition to commercial farming, technology intensive and youth recruitment in farming by easing access to finance and entrepreneurship and enhancing risk transfer are equally critical.
- Investing in mitigation of high risks associated with depletion of groundwater, land degradation and desertification from a cost-benefit standpoint for adaptation to climate change in water, agriculture and land sectors. The benefits and co-benefits of sustainability should be in monetary and non-monetary terms.
- Enhancing the capacities to generate data to assess and monitor water-land-food security through technology tools and instruments.
- Enforcing mechanisms for existing and forthcoming policies and regulations, to protect the resources and incentivize collective engagement in resources conservation.
- Proofing the water and land for food security against the impact of protracted conflicts and

fragility and ways of recovery and resilience of water-land and food security.

- Mainstreaming land and water management for food security- from a nexus perspective- in national development agendas to achieve SDGs, NDCs targets and Sendai Framework with clear budgeting and reviewing frameworks.
- Accounting for risks and costs associated with uncertainty in food security versus change in water and land through foresight and prospective studies and analysis
- Enacting the linkages between Research- Policy and Development with mutual accountability frameworks for efficient investments and returns in water-land and food security.

The presentation will conclude with a few bright spots and best practices taking place at a pilot and programmatic levels in selected countries (conflict, non-conflict) from the region. The growing pace in innovation, renewables, desalination for agriculture, adoption of smart technologies and institutional reforms are all small bold steps to be scaled up.



Vincent Gitz

Vincent Gitz is Director of Program and Platforms at CIFOR-ICRAF. Alumni of Ecole Polytechnique and AgroParisTech. Previously researcher at CIRED, CIRAD, and coordinator of CFS's High Level Panel of Experts on Food Security and Nutrition. He served also as Director for Food Policy in France.

Forests, trees and agroforestry to improve land and water management for resilient Mediterranean food systems

Land and water availability are critical limiting factors for agricultural production in the Mediterranean region, giving particular importance to forests, rangelands and trees in farming and food systems. Forests and trees play multiple roles that contribute to conserve and sustainably manage land and water in the geo-climatic context of Mediterranean landscapes including: fight against erosion caused by violent precipitations, ability to deeply pump water during the dry season, providing shade and contributing to conserve humidity creating locally more favourable conditions for crops and livestock. They allow to use land that cannot, or can no more, be used sustainably for crop production and are a key part of integrated production systems such as agroforestry and silvo-pastoral systems. We show how managing forests, trees and agroforestry can improve land and water management for more resilient Mediterranean food systems, in the face of increased pressures, including increasing competing demands for land and water, climate change, and associated increased risks of wildfires. Such measures, that can be integrated in the National Adaptation Plans in Mediterranean countries constitute a concrete way to integrate concerns of Mediterranean food systems into climate action.



Ioannis Daliakopoulos

Ioannis Daliakopoulos is Assistant Professor at the Department of Agriculture at the Hellenic Mediterranean University. He holds a Diploma and PhD in Environmental Engineering and a MASc in Water Resources. His research interests include the application of new technologies in the plant-soil-water interface. He specializes in the application of data mining and forecasting tools using of machine learning and optimization algorithms to analyze spatio-temporal datasets and stochastic processes. He has served as co-PI and co-WP leader for EU Projects. He coordinates the nationally funded innovation project DRIP on high-precision drip irrigation

Sustainable Soil and Water Management for Combating Land Degradation and Desertification and Promoting Mediterranean Ecosystem Restoration: The REACT4MED Concept

Ioannis N. Daliakopoulos, Marco Micotti, Aristeidis Koutroulis, Evelyn Lukat, Adrianna Bruggeman, Anna Brook, Artemio Cerdà, Rachid Mrabet, Pandi Zdruli, Funda Kidoğlu, El Sayed El Habasha, Thrassyvoulos Manios
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Every year, soil erosion strips away from the Mediterranean land about 0.5 t ha⁻¹ of fertile soil, a rate almost double than the European average. At the same time, the water resources of the Mediterranean basin are under constant pressure due to climatic aridity and extremes, but mainly due to anthropogenic causes, such as climate change, urbanization, population growth and resource overexploitation. These pressures inevitably lead to a downward spiral of land degradation towards desertification, the single greatest risks to the conservation of local ecosystems and the livelihoods of the Mediterranean communities. While our understanding and the flow of information about these threats is unprecedented, and the state-of-the-art in ecosystem conservation and restoration has reached a satisfactory level, challenges persist; nature conservation is no longer enough to guarantee Land Degradation Neutrality (SDG 15.3) and uptake of good practices by stakeholders is hindered by constraints and barriers both biophysical and socioeconomic. In this context, the PRIMA REACT4MED Project aspires to bridge these gaps and to support the widespread implementation of scientifically grounded ecosystem restoration measures and best practices that enable sustainable land and water management. At the local level, the REACT4MED actions are focused on 8 Mediterranean Pilot Areas, nevertheless, the Project aims to disseminate and eventually accelerate relevant technological innovation throughout the Mediterranean where challenges are similar. The foundation of REACT4MED includes:

- Enhancing community capacity with at least 32 capacity building events that will create the appropriate enabling environment for the restoration actions to be implemented.
- Promoting and successfully out-scaling at least 8 cost-effective Sustainable Land and Water Management solutions, and oversee their implementation
- Further promoting the implementation of proven and cost-effective restoration actions to stakeholders outside REACT4MED with a variety of dissemination products.
- Developing and releasing a coherent set of at least 5 Land degradation Decision Support tools as open-source software, addressing the tasks of harmonized land degradation assessment, identification of potentially suitable scale-up areas, and informing decision making with future climate and socio-economic scenarios.
- Actively seeking and promoting private and public investment opportunities that can enhance the adoption of SLWM and providing tools for a significant number of stakeholders, focusing on weaker groups such as youth and women.

Supported by these elements, the overarching goal of REACT4MED is to initiate and support coordinated, scientifically proven, restoration actions affecting as much as 2,000 km² of Mediterranean agro-ecosystems, which will have a lasting impact well beyond the lifetime of the Project.



SFS-MED BLUE GROWTH: BENEFICIAL PRODUCTION AND CONSUMPTION WITH LESS ENVIRONMENTAL PRESSURE

Moderator: **Arni Mathiesen** Senior Advisor, Iceland Ocean Cluster

Rapporteur: **Massimo Zuccaro**, CIHEAM Bari

Objective: to provide solutions to improve the role of Aquatic Blue Foods, in the context of its inclusion and role in the Mediterranean Diet, with the aim of reducing its environmental impact and enhancing the beneficial effects on the environment and our human socioeconomic, food and nutrition systems.

The role played by Aquatic Blue Foods in the achievement of the sustainability of the food systems is too often overlooked. It could play a central role in food and nutrition security for billions of people thanks to its nutritional benefits (i.e.: animal protein, zinc, vitamin A and omega-3 fatty acids), as well as in livelihoods, economies, and cultures of many coastal and inland communities, contributing to their resilience, good jobs, gender equity, and poverty alleviation.

Aquatic Blue food System: a vision for the future sustainable growth

Nevertheless, despite the potential of Aquatic Blue Foods For delivering progress on 10 of the 17 Sustainable development Goals (SDGs), they are often left out of the sustainable and equitable food system strategies, governance, planning, and resource allocations. Governments and International alliances must embed aquatic foods in food, health, and development policies and foster innovation and entrepreneurship to develop Aquatic Blue Foods that offer affordable, sustainable nutrition. In this regard, our present-day aquatic/blue foods system management needs an effort to improve, in principle, the environmental and social impact of the fishery and aquaculture sectors, dealing with the following main challenges:

- broadening a diverse sense of aquaculture, both traditional and novel.
- encouraging new uses the bioprospecting within present catch or production.
- finding and developing new species for sustainable harvesting or production (incl. seaweed and jellyfish, and microalgae and insects for feed needs).
- eliminating land-based pollution (incl. plastics) as the primary polluter of oceans.
- strengthening circular economy and other coastal activities for diversifying income generation of coastal communities.

The Mediterranean Diet lever.

The Mediterranean Diet due to its inherent value, and inclusion of Aquatic Blue Foods, regarding both health and environment can be used as a lever to reduce pressures from current food systems. It could help to improve the processes of harvesting or production, promote healthier consumption, and contribute to dealing with social challenges related to the Mediterranean communities' resilience. The Cultural Heritage element of the Mediterranean Diet can never be overestimated, and it should be used to promote improvements in consumption both within the region as well as internationally due to its wide and valuable name recognition. In this regard, Mediterranean Diet and Aquatic Blue Foods can promote dietary elements with lighter environmental footprints and value, for instance, healthy micronutrients, or additional global protein production or protein replacement. This could be guaranteed through e.g., a quality system for Mediterranean Diet seafood products able to ensure the sustainability of food systems and nutritional aspects of its Aquatic Blue Foods.

Socio-economic changes.

All activities need to be well founded in policies relating to gender equality, youth, and the disadvantaged, including migrants. Essential to this is opening opportunities for training and education as well as work opportunities and SME establishment.

The challenges of this session, therefore, are to improve the understanding of the role of Aquatic Blue Foods, in the context of its inclusion and role in the Mediterranean Diet, with the aim of reducing its environmental impact and enhancing the beneficial effects it can have on the environment and our human socioeconomic, food and nutrition systems.

MODERATOR:



Arni M. Mathiesen

Árni M. Mathiesen Senior Advisor Iceland Ocean Cluster 2020 to date. BVM&S, Edinburgh. M.Sc. Aquatic Veterinary Sci., Stirling. Member of the Icelandic Parliament, 1991-2009. Minister of Fisheries 1999-2005. Minister of Finance 2005-2009. Head of the Fisheries and Aquaculture Department FAO 2010-2020.

RAPPORTEUR:



Massimo Zuccaro

Massimo Zuccaro, coordinator of Knowledge Unit on "Coastal area management and inclusive development" at CIHEAM Bari, Ph.D. in Environment, Resources and Sustainable Development (University of Naples "Parthenope"). He has fifteen-year experience as project manager of research and cooperation initiatives on integrated and sustainable development of the vulnerable and marginal coastal communities in the Mediterranean area

PARTICIPANTS:



Roberto Ugolini

Roberto UGOLINI, marine biologist (La Sapienza Rome University). More than 30 experiences in small scale fishery and aquaculture in Mediterranean and other Regions, of which 15 years of work with international organisation (MAECI, FAO, UNIDO, OUDA/UNDP, NGO) for development and emergency projects. Since 2015 he is working for CIHEAM Bari.



Alvaro Albacete Peres

Alvaro Albacete Perea is Deputy Secretary General at the Union for the Mediterranean since 7 March 2022. Alvaro Albacete Perea is Deputy Secretary General at the Union for the Mediterranean since 7 March 2022. Amb. Albacete is a career diplomat of Spain. Prior to his current assignment, he served as Deputy head of Cabinet of the Foreign Minister, Director General of Sefarad/Israel Center, and Ambassador At Large responsible for the relations of Spain with Jewish Communities and Organizations. More recently, Ambassador Albacete has held the positions of Deputy Secretary General of the International Dialogue Center, and diplomatic adviser in the Office of the Prime Minister of Spain.

Sustainable Blu Economy in the Mediterranean-a driver of regional cooperation

Sustainable food from the sea is one of 10 key priorities agreed upon by the 42 member countries of the Union for the Mediterranean. On February 2nd, 2021, Ministers adopted the UfM Ministerial Declaration on Sustainable Blue Economy, firmly renewing their commitment to cooperate closely to address joint challenges across key blue economy sectors in the Mediterranean and raise the bar on collective ambitions.

Fisheries and aquaculture are essential economic drivers for the region, an important source of employment, a cornerstone of the Mediterranean diet, and key to the livelihoods of vulnerable coastal communities. Yet, increased pollution, habitat degradation, overexploitation of the natural resources, and the impacts of climate change pose complex challenges, coupled with the fact that fishing and aquaculture have been among the sectors most hit by the COVID-19 pandemic. The Roadmap for the implementation of the UfM Ministerial on Sustainable Blue Economy focuses on the short, medium and long term joint actions by the 42 UfM countries, with sustainability and circularity at the core. Indeed, shifting towards blue circular economy approaches in the Med has great potential to improve existing value chains, promote digital solutions, ensure innovative jobs and upgrade knowledge and skills. This shift will require inter alia changes in both producers and consumers models, behaviors and lifestyles; closing energy and materials loops to prevent the depletion of resources; adapting to innovative solutions; and ensuring solid knowledge and technical capacities.



Melanie Siggs

Melanie Siggs has extensive experience of working internationally across both commercial and NGO sectors addressing issues relating to food and timber, although she is best known for her work on fisheries and aquaculture in the past 10 years. She is a Director of Global Seafood Alliance, Vice President of The Centre for Responsible Seafood and an Advisor to the World Economic Forum's Ocean Program 'Friends of Ocean Action'. She holds an MSc in Responsibility & Business Practice and is an Honorary Professor of the Heriot-Watt University, Edinburgh, Scotland. Melanie is a former Special Adviser to HRH The Prince of Wales' International Sustainability Unit.



Stephanie Vella

Dr Stephanie Vella is an executive director in a leading economic consultancy firm. She is currently the National Hub for Malta on the WestMED initiative bringing stakeholders together for the development of maritime related projects. Dr Vella has been involved in the development of the integrated Maritime Policy for Malta and in an assessment of the sectoral contribution of the maritime sector in Malta.

The experience of the WestMED Initiative in supporting ecosystems of maritime clusters to valorise Blue Foods and the Mediterranean Diet

The WestMED Initiative Assistance Mechanism (WMAM) through the functions of its technical groups, are supporting a number of virtuous examples of valorisation of the Mediterranean

Diet, which naturally requires sea basin-wide actions due to its common heritage dimension. Through the Maritime Clusters Alliance, and the work being undertaken in other important thematic areas, the WMAM is enabling the process of building enhanced links between traditional and professional careers and jobs and the relevant sustainable supply chains, whilst also supporting activities towards the sustainability of traditional and innovative consumption practices.



Vera Agostini

Vera Agostini is the Deputy Director of the Fisheries and Aquaculture Division at the United Nations, Food and Agriculture Organization (FAO). Dr. Agostini is a fisheries scientist by training, who has held positions across three sectors (non-governmental, government, and academia/educational) providing technical and strategic leadership across a range of multi-disciplinary efforts and working with coastal communities and artisanal fishers around the globe.

A Blue Transformation to harness the possibility of tomorrow

The aquatic food sector has undergone significant transformation in recent time. We have expanded what we produce, diversified how we produced it and become more effective in what we used this production for. As expectations for aquatic food systems increase, we must ensure further growth is sustainable, equitable and targets food security and nutrition needs. Transformations in the fisheries and aquaculture sector have been primarily driven by economic opportunity, but more can be achieved if we are collectively more targeted in guiding future transformation. This presentation will outline FAO's Blue Transformation, a vision to guide this future transformation and increase the contribution of aquatic food sector to nutritious and affordable healthy diets for the most vulnerable, while fostering equitable growth, especially for those communities that depend on fisheries and aquaculture. Leaving no one behind.



Raúl Compés López

Bio Raul CompesnLopez

Mediterranean diet and sustainability

The Mediterranean diet is considered to be one of the healthiest diets due to the dietary and nutritional properties of the products it contains. However, in order to be able to affirm that it is also sustainable, it is necessary to take into account how its food is produced, as there are production and organisational models that are more sustainable and others less. In terms of sustainability, it is therefore necessary to examine the environmental and social impacts and the economic viability of the farms and firms producing these products.



AGROECOLOGICAL TRANSITIONS OF THE MEDITERRANEAN FOOD SYSTEMS: AN ENTRY POINT FOR THE REVITALIZATION OF THE MEDITERRANEAN DIET

Moderator: **Massimo Iannetta**, Head, Biotechnologies and Agroindustry Division, ENEA; Chair, Technical Scientific Committee Italian AgriFood Technological Cluster CL.A.N.
Rapporteur: **Milena Stefanova**, ENEA

Objective: to elaborate on the base of the discussion “a change of route for the Med Diet Revitalization”; to contribute to expected results of the 3d International Med Diet conference

The new global strategy post-2022 for sustainable consumption and productions considers the transformation of food systems a priority not only in reference to their profound contradictions but also in recognition of their potential as one of the drivers for achieving ten of the Sustainable Development Goals (SDGs).

One of the approaches for such a profound transformation of the agro-food systems is based on the agroecology as a science, a set of production and consumption practices and a political movement. Recently a set of thirteen consolidated principles for the agroecological transitions of the entire global food system have been determined on the base of the outcomes from two international initiatives. The first one carried out under the auspices of FAO has led to the participatory definition of the constituent elements of agroecology intended to frame the political engagement of FAO member countries with pathways of the agroecological transitions. The second initiative was carried by High Level Panel of Experts (HLPE) in the framework of the report to for the Committee on World Food Security (CFS) “Agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition”. It analyzed the definitions concepts and principles of agroecology in a historic perspective developing the scientific base for policy recommendations and consolidating a set of thirteen contemporary agroecological principles, aligned with the constituent elements: recycling; input reduction; soil health; animal health; biodiversity; synergy; economic diversification; co-creation of knowledge; social values and diets; fairness; connectivity; land and natural resource governance; participation.

The agroecological approach considers food production as an entry point for the transformation of the entire food system toward achieving the SDGs. Its focus is on the environmental and to a certain extent also the social dimension of sustainability at the two ends of the current rather linear food value chains – agricultural production and consumption, while ensuring that agricultural production is also viable in economic terms and that the dietary outcomes meet desired cultural and nutritional characteristics.

Objectives and Approach: This session, building upon the current MED Diet 4 Framework and upon the consolidated principles for the agroecological transitions for food systems aims at launching an effort for the identification of agroecological transition pathways that lead to the revitalization of the Med Diet in the Mediterranean countries.

The focus of the session is the role of knowledge, and in particular the new models of knowledge co-production in enabling agroecological transition pathways that can lead to the revitalization of the Med Diet in the Mediterranean region toward the SDGs. The session will consist of a key note speech on this topic, presentation of several cases that represent agroecological transition pathways at different stages and in different territorial contexts and a concluding discussion on elaborating an

approach for the identification of agroecological pathways in the Mediterranean region.

It will contribute to all of the expected results of the 3d International Med Diet conference and in particular to:

- Issuing a SFS-MED call for a Joint Action
- Identifying game-changing solutions
- Unlocking the potential of knowledge co-creation and capacity building
- Implementing systemic approach for the SFS-MED platform
- Changing the perception of the Med Diet

MODERATOR:



Massimo Iannetta

Head, “Biotechnologies and Agroindustry” Division, Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA); Chair, Technical Scientific Committee of Italian AgriFood Technological Cluster CL.A.N.

RAPPORTEUR:



Milena Stefanova

Milena Stefanova, Ph.D. in Mathematics and Computer Science, researcher at the Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA). Research interests in agroecological transitions of food value chains and in sustainability analysis of food systems.

PARTICIPANTS:



Andrea Segrè

Professor of International and Comparative Agricultural Policy since 2000, Andrea Segrè served as dean of the Faculty of Agriculture and Chairman of the Department of Food Science and Technology, University of Bologna. Founder of Last Minute Market, academic spin off, and of Zero Waste Campaign, he is currently scientific director of Waste Watcher International Observatory on Food and Sustainability. Last June 2022 he was appointed Special Advisor of the Mayor of Bologna on Urban Food Policies. In 2012 he was awarded with the Pellegrino Artusi International Prize and San Giusto d’Oro Award in 2020. He authored a number of scientific articles on international and national Journals, last book: L’insostenibile pesantezza dello spreco alimentare. Dallo Spreco zero alla Dieta mediterranea (Castelvecchi, 2022).

From Food Waste to Mediterranean Diet: the Path to Sustainable Development

Since the creation of the Agenda 2030, reducing food waste was listed among the 17 Sustainable Development Goals to be reached by 2030 (12.3 Halving food waste and food losses) both at a domestic

and public level. Policies aimed at promoting the sustainability of food systems and of consumption habits along the agri-food chain - starting from the reduction of food waste - represent a critical step to ensure everyone a sustainable and healthy diet. From this perspective, the Mediterranean Diet (MD) can be considered one of the most virtuous routes for promoting and reaching the objectives of the Agenda 2030. However, recent data have demonstrated that in most of the countries food security and food access has significantly worsened due to the pandemic, hindering the chances to actually reach SDGs by 2030. It is urgent to fight against poverty and food insecurity especially by implementing policies that allow to contrast climate change and to preserve traditional food cultures that have played a key role both in protecting ecosystems and promoting diverse and healthy diets.

The important nexus between Mediterranean Diet and food waste will be addressed in the presentation. The MD is not only a historical and cultural heritage, but also a strategic resource that promotes and favors the transitions towards sustainability. Indeed, while many diets became harmful both for the environment and for human health, the MD promotes a healthy lifestyle and contributes to the reduction of environmental impacts and food waste by favoring wellbeing both for current and future generations. Starting from the need to reduce agri-food losses, it is extremely urgent to increase the recovery of surpluses by favoring measures that allow to prevent waste and promote healthy and sustainable diets that are accessible to everyone.

Within this framework, the 2021-2022 Waste Watcher International Observatory on Food and Sustainability - the Observatory created in 2013 by Last Minute Market spin off of the University of Bologna - conducted a survey on food habits by focusing on households and families from different countries: Germany, China, United States, Canada, Russia, Spain, Great Britain and Italy. The main results will be reported during the presentation with the objective to study social causes that lead to food waste in order to support the management and definition of policies and actions - both at public and private level - for the reduction of food waste among households and promoting sustainable and healthy diets (The research, conducted with a rigorous method based on opinions and self perceptions, aims at exploring the main drivers of food habits and food waste, but also at exploring the meaning of sustainability by focusing on the nexus between environment, food and health).



Dessislava Dimitrova

Dessislava Dimitrova is a Bulgarian biologist and ethnobotanist and the coordinator of Slow Food in Bulgaria. She studies the biocultural diversity and how its present valorization (re)shapes the socio-cultural processes; climate change, food sovereignty, human diets and human-nature interactions.

Terra Madre Balkans – a network for research of biocultural diversity and its valorization

Balkan food is a shared heritage for the whole region due to the crossborder interconnections in the past and common challenges and perspectives in the present. However, this knowledge is scattered, undervalued and hence threatened by extinction due to aging of the rural population, rural-urban migration, abandonment of local genetic resources and their replacement with international ones, industrialization of food production, climate change, etc. Terra Madre Balkans Networks was launched in 2010 to mobilize the potential of Slow Food communities in the Balkans to safeguard, develop and promote the food heritage in the region. The network involves experts from various fields – farmers, food producers, chefs, teachers, researchers and a large number of activists and volunteers. Such concentration of professionals related to food is a prerequisite for its interdisciplinary research, e.g. from biological, ecological, economic and sociocultural aspects. Therefore an academic network of universities and research centres is being gathered in support of the food communities, farmers and artisanal producers in the Terra Madre Balkans network. We present in this lecture the philosophy of Terra Madre Balkans network and support its functionality with case studies from the region.



Lydie Stella Koutika

Lydie-Stella Koutika is a soil scientist (Congo), a member of STC's 4 per 1000 Initiative, Global Soil Biodiversity Initiative and editorial board of some journals. She is a laureate of 'AU Kwame Nkrumah Award for Women' (2014), TWAS)-Al-Kharafi Prize (2018) and Glinka World Soil Champion (2021).

Change of Course Towards More Sustainable and Resilient Food Systems in Mediterranean Countries: In Mediterranean Diet as a Strategic Resource to Accelerate the Agenda 2030 in the Region

Agroecology enables healthy soils which help to solve several challenges i.e., food insecurity, climate warming, land degradation and biodiversity loss. Interaction between soil microorganisms, nutrients (C, N, P, S) cycling and environment boosts soil health and ecosystem services. Arenosols, the most represented soil type in Africa (22%), spanning over 6 million hectares in Central Africa, are sandy (→ 90%) with very low soil organic matter content (←1%) and holding capacity. Extensive research was conducted on soil health of pure and mixed plantations of eucalyptus and acacia, and the ecosystem services they provide in the Congolese coastal plains. Increased soil carbon and nitrogen stocks in mixed-species stands relative to eucalyptus and phosphorus availability in afforested stands relative to savannas evidenced an improvement in soil health. Actinobacteria phylum which has the ability to enhance organic residues decomposition was dominant in all stands. Positive correlation between soil attributes and soil bacterial community gives insight on the potentiality of enhanced interaction between soil microorganisms, nutrients cycling and environment to secure food systems (increased soil fertility), mitigate climate change (C storage) and restore lands and biodiversity.



Nicolas Tinois

Nicolas is working in the bioeconomy at the project management Jülich. While on a mission in the German Federal Ministry for Food and Agriculture (BMEL), he became chair of the new SWG on Agroecology under SCAR, responsible for preparing an EU partnership on Agroecology under Horizon Europe.

European R&I Partnership on Agroecology Living Labs and Research Infrastructures

The partnership aims to accelerate the transition towards sustainable, climate- and ecosystem-friendly farming practices. To do so, it will 1) enable a better comprehension of agroecological processes from farm to landscape levels, 2) boost place-based innovation in cocreative environments and 3) improve the flow and uptake of knowledge and innovations on agroecology. It pursues the common vision to team-up and unlock the transition to agroecology so that farming systems are resilient, prosperous, place-sensitive, climate-, biodiversity- and people-friendly by 2050.



Lisa Paganelli

Founder of the "Romagna-Biosymbiotic District" and responsible as "Coldiretti Women Enterprise", for the Provinces of Forlì-Cesena and Rimini. In 2016, she awarded the European Prize for "Innovation" in Brussels for having applied biosymbiotic agriculture to the farming methods and developed a project, which enhances the economic growth of disadvantaged rural areas. In 2018 co-experimenter with IRST (Romagna Scientific Institute for Cancer Research and Cure), in order to estimate the activity of the intestinal bioma after following a diet based on products originating from biosymbiotic agriculture.



Tarek Elarabi



Emanuele Marconi



SFS AS A TRIGGER FOR ONE HEALTH TO PROMOTE RESILIENCE AND SUSTAINABLE GROWTH IN THE MEDITERRANEAN AND BEYOND

Moderator: **Biagio Di Terlizzi**, Deputy Director, CIHEAM Bari
Rapporteur: **Rula Atweh**, Project Officer and Coordinator, National Council for Scientific Research of Lebanon

Objective: to share experiences and ideas of concrete application of One Health approach, with the view to identify concrete tools for its enhancement in contexts where production systems are crucial for food security and human health. To dig out how the diversification of food systems through research and innovation might increase food security and boost resilience vis-à-vis fragilities and crises, also building on science-policy dialogue and public-private partnerships.

One Health is an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems. It recognizes the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and inter-dependent (OHHLEP One Health definition, 2021). The approach is based on the concept that humans, animals and the environment are part of the same eco-system.

The Mediterranean region is a living example of how the different elements of the eco-system (both inland and marine) need to exist in reciprocal harmony. Historically, this region has always been considered as a powerful example for both the high quality of its local food products and diet as well as the social behaviours leading to an integrated and sustainable ecosystem, which in turns safeguards One Health. In this context, it is still relevant that the Mediterranean diet is both an important world heritage of humanity and a means of reducing health risks such as cardiovascular diseases and cancer. Nevertheless, an increasing number of countries bordering the Mediterranean are getting into an eating “Westernized” habits, which may cause undesirable and negative consequences not only on health and nutrition but also on the cultural, social and economic issues concerning the environment sustainability. This is represented by certain risks.

The rural de-population; the socio-economic instability, conflicts and migration crisis or other health threats like pandemic put at risk and create a widespread vulnerability. In this framework, the nexus between the environment’s ‘health’, healthy and sustainable agricultural production and human health clearly raises a bigger and more complicated challenge. It is therefore necessary in this crucial historical moment to systematize the agriculture/food/health nexus. As outlined in occasion of the 2nd World Conference on the Revitalization of the Mediterranean Diet, transforming the food systems to make them more sustainable, equitable and resilient will be the key to protecting both our health and the health of the planet now and in the future.

The Mediterranean Diet might thus be considered a good example of concrete application of One Health approach. Sustainable Food Systems (SFS) too might in practice contribute to the enhancement of One Health, while guaranteeing food security and safety. In fact, SFS are at the core of the intersection among human, animal and environment health. The transformation of agrifood system through an inclusive, sustainable, efficient and resilient approach could ensure economic and social inclusion and improved health for all food system actors, from producers to consumers. In this context, the private sector should play a role together with the public sector in the promo-

tion of innovation and in uncapping the potential of youth and women. All these elements will allow to address local communities’ needs and to reduce negative environmental impacts and resisting future shocks

MODERATOR:



Biagio Di Terlizzi

Deputy Director, CIHEAM Bari

RAPPORTEUR:



Rula Atweh

Project Officer and Coordinator, National Council for Scientific Research of Lebanon

PARTICIPANTS:



Carlo La Vecchia

Dr. La Vecchia is Professor of Medical Statistics and Epidemiology at the School of Medicine at the University of Milan. He is among the most renowned and productive epidemiologists in the field according to Clarivate HighlyCited.com. He was Head of the Dept. of Epidemiology at the Mario Negri Institute in Milan, and Adjunct Associate Professor of Epidemiology at Harvard School of Public Health, Adjunct Professor of Medicine at Vanderbilt Medical Centre and the Vanderbilt-Ingram Cancer Centre, Nashville, TN, and of Epidemiology at the University of Lausanne, CH.



Arni M. Mathiesen

Árni M. Mathiesen Senior Advisor Iceland Ocean Cluster 2020 to date. BVM&S, Edinburgh. M.Sc. Aquatic Veterinary Sci., Stirling. Member of the Icelandic Parliament, 1991-2009. Minister of Fisheries 1999-2005. Minister of Finance 2005-2009. Head of the Fisheries and Aquaculture Department FAO 2010-2020.



Monique Eloit



Monique Eloit



Abdelhamid El Zoheiry



CONTRIBUTING TO THE SUSTAINABILITY OF THE MEDITERRANEAN DIET

Moderator: **Alexandre Meybeck**, Center for International Forestry Research (CIFOR)
 Rapporteur : **Hamid El Bilali**, CIHEAM-Bari

Objective: To identify actions that contribute to improve the sustainability of the Mediterranean diet and that can ground individual and collective commitments

The positive contribution of the Mediterranean Diet to nutrition and health is well documented. More recently an important corpus has highlighted its positive contributions to sustainable food systems in all dimensions of sustainability, environmental, economic and social. With its emphasis on plant-based foods, on moderation, diversity and balance, the Mediterranean Diet has a lower impact on natural resources, particularly on land and water, as well as on greenhouse gases emissions. The importance of diversity of foods and diets, linked as they are to territories, grounds the recognition of the key role of biodiversity, a first step for its sustainable use. The Mediterranean diet, in its diversity, can trigger local economic development, with important economic and social benefits; particularly when fully integrating the cultural dimensions of diets and their links to landscapes and communities, as has been highlighted by participants in the 2nd World Conference on the Revitalization of the Mediterranean Diet, held in 2019, in Palermo.

Diets in the Mediterranean are experiencing the same evolutions than at global level. Adherence to the Mediterranean diet is declining; the sustainability of the Mediterranean diet and of Mediterranean food systems are under threat. Concerned experts have repeatedly called for action, to revitalize the Mediterranean diet.

The purpose of this session is to identify actions that contribute to improve the sustainability of the Mediterranean diet and that can ground individual and collective commitments. Actors and experts, from different backgrounds and at different steps in food systems from consumption to production, will each briefly present actions that can trigger change towards more sustainability and better adherence to the Mediterranean Diet. The group will consider the actions proposed, question their pertinence, potential undesired impacts and potential to effectively trigger the expected change. Participants in the room and on-line will be invited to contribute to this critical exercise. The idea is that these actions can ground individual and collective commitments of various categories of actors that will catalyze favorable dynamics at all levels.

MODERATOR:



Alexandre Meybeck

Alexandre Meybeck is a consultant in CIFOR. He has worked in FAO and the French Ministry of Agriculture. He created and coordinated the FAO/UNEP Sustainable Food Systems programme and authored a hundred publications on climate change and agriculture, sustainable food systems, sustainable diets.

RAPPORTEUR:



Hamid El Bilali

Hamid El Bilali is a research scientist at the CIHEAM Bari. Since December 2004, he has been engaged in research, training and cooperation activities relating to sustainable food systems, food security, Mediterranean diet, food losses and waste, sustainable food consumption and production, traditional and typical agro-food products, rural livelihoods diversification, and rural policy and governance. He is author of more than 200 journal and conference papers and member of the editorial boards of numerous journals dealing with agriculture, food and rural development.

PARTICIPANTS:



Denis Lairon

Denis LAIRON is Emeritus Research Director at INSERM (National Institute of Health and Medical Research), Aix-Marseille University, France, with expertise in Mediterranean diet and sustainable diets (250 original scientific papers). Present member of the UN Sustainable food system programme/One Planet.

The Mediterranean diet and food system to drive actions fitting the UN « One health » concept and SDGs.

- The United Nations concept « One health », meaning that humans and planet health are fully interconnected institutionalizes a new way of thinking and planning actions for a shared desirable future. Indeed, it is translated into the 17 UN 2030 SDGs promoting outstanding actions to properly facing challenges and providing urgent efficient solutions (especially SDG 2, 6 & 12).
- The food system sustaining the traditional plant-based Mediterranean diet recently moved from a basically adapted local one, to a nutritionally, socially and environmentally degraded industrial process. Three international consensus statements (1995, 2011 and 2020) reviewed on the protection of human health by a firm adherence to the traditional plant-based Mediterranean diet, more evidence on the nutritional, health and social benefits of present adherence and on the positive impacts of such a plant-based food system and diet on resources and environment, indeed a sustainable food system and diet.
 - Three main actions could be relevant to revitalize and sustain a new transition for a sustainable plant-based, Mediterranean food system and diet:
 - to put it on top of the agenda at institutional, regional and municipality levels,
 - to support information and innovative actions at all levels, especially general population and youngs,
 - to put emphasis on agro-ecology and organic for healthy food production and consumption.



Elliot M. Berry

Berry has been a Scientist at Rockefeller, MIT, and Cambridge, Professor at La Sapienza, FAO and Yale Universities, and Director of the School of Public Health at the Hebrew University. He has authored over 300 publications including co-editing the *Encyclopaedia on Food Security and Sustainability*.

Educating Mediterranean Diet and Lifestyle must be part of Sustainable Mediterranean Food Systems

Sustainability has recently been added to the dimensions of food security, as an integral part of sustainable food systems which are driven by environment, geopolitics, demographics, policy regulations, socio-cultural-economic, science and technology and infrastructure factors. These lead to four principal outcomes — environment, food security and nutrition, health and socio-cultural-economic. A consensus is gathering how to improve sustainable food systems: all environmental analysts agree on the importance of promoting more plant-based diets—achieved practically by using “more forks than knives”. The Mediterranean Diet pattern is a case study for a sustainable diet. It has the best scientific evidence for being healthy, with economic, socio-cultural and eco-friendly benefits. However, a major challenge is that it is not consumed by the majority of the populations in the Mediterranean. Reasons include costs, poor food choices and lack of time. Solutions must involve nutrition and lifestyle education throughout the school years and including kitchen gardens, cafeteria healthy choices, front of package labeling and safe exercise facilities. All policies must be equitable, realizing that “a well fed nation is a healthy nation is a sustainable and productive nation”.



Roberto Carcangiu

President of the Professional Association of Italian Chefs. Research and development consultant for companies in the food sector. Educational director of the professional institute Con Gusto Gourmet Institute. Scientific director I TECNICI Italian gourmet publishing house



Daniele Rossi



Laila Naffaa



Roberta Billitteri

Roberta Billitteri, sicilian agricultural entrepreneur, produces and transforms two Slow Food Presidia, the Polizzi Generosa Badda Bean and the Polizzi Generosa Pepper, in the heart of Madonie Park Mountain. Since July 2021 she is Member of the Board of Directors in Slow Food Italy APS with a specific responsibility for projects and activities in Biodiversity field.



Konstadinos Mattas

Professor Konstadinos Mattas, Aristotle University of Thessaloniki, has published more than 300 referred articles in international journals, in collective volumes and proceedings mainly within the agrifood sector. He has participated and coordinated several EU research projects and currently he is the coordinator of BioValue, a biodiversity EU funded project.

Diverse food dish: The undermining concept in a healthy Mediterranean diet

Mediterranean Diet’s contribution to healthiness and sustainability is well accepted. Still, there are actions that can be adopted and promoted to strengthen the Diet’s support to sustainability. Besides all well-known features of a Med Diet, researchers still reveal new dimensions and new characteristics of this rich diet. Among all of them, one underestimated feature of Med Diet is the food dish diversity in terms of everyday meals and seasonal variation. In this respect, bringing back to cultivation underutilized crops and preparing novel food dishes for today’s consumer, will be one strategic action reaping benefits for sustainability and human health. Unidentified number of plants and landraces exist in the area of Med-basin, which can be brought to food dish. Among them some pulses and green leaves have exceptional nutritional and environmental value. Thus, an action targeting those specific crops could further strengthen sustainability and mitigate climate change.

Keywords: sustainability; neglected and underutilized crop; health; nutrition; Mediterranean



Gianluigi Cardone

Gianluigi Cardone worked at the Consortium of Defence and Exploitation of Intensive Productions, of Environment and Rural Territory of Province of Bari, as technical assistance officer. Since 2004, he has been working as scientific administrator at CIHEAM Bari. His analyses and research are mainly focused on assessment of sustainability, improvement and enhancement of Mediterranean agri-food systems and Mediterranean diet, farm management, agribusiness, certification systems and evaluation of socio-economic impacts of projects and issues.

Innovative actions to evaluate and strengthen the sustainability of the typical and traditional products of the Mediterranean Diet within local agri-food supply chains

In the framework of the UN 2030 Agenda, CIHEAM Bari is committed to evaluate and strengthen the sustainability of typical and traditional foodstuffs, included in the pyramid of the Mediterranean diet, with the aim of developing and enhancing the agri-food supply chains. In the field of research and cooperation, the projects of CIHEAM Bari on sustainable food systems have had positive impacts on territories and communities. The Agriculture & Quality project launched a virtuous path that leads to the certification of sustainability with a collective brand to be applied to local agri-food products, using guidelines and targeted indicators based on the SAFA-FAO approach. The FOOD4HEALTH project created community laboratories in some regions of Italy, Albania, and Montenegro, where small farmers and fishermen can process their agriculture and fishery products according to the EU quality standards and in line with sustainability principles. The Apulian Lifestyle: for a happy long-life project evaluated the sustainability of the Mediterranean diet model within Puglia territory in Italy, by multi-criteria analysis methodologies. As part of the education field, CIHEAM Bari has activated a master of science Sustainable Agro-ecosystems and Resilience, to teach future generations how to improve the sustainability of agro-ecosystems. Working jointly on research, education and cooperation fields, the innovative approach of CIHEAM Bari has amplified the impacts of its work on the Mediterranean diet sustainability, with results of some initiatives serving as inputs for others.



Barbara Burlingame

Barbara Burlingame is nutrition scientist and Professor of Public Health Nutrition and Food Systems. For 16 years she worked at the Food and Agriculture Organization, most recently as Chief/ Deputy Director of Nutrition. Currently, she is member of the HLPE Steering Committee of the CFS, she chairs the IUNS Sustainable Diets Task Force, and she's specialty chief editor of *Frontiers in Nutrition*, and member of the Global-Hub on Indigenous Peoples' Food Systems. In 2021, Prof Burlingame was one of three people awarded the Ancel and Margaret Keys Prize in recognition of her contributions to the Mediterranean Diet.

Mediterranean diet represented in science/policy recommendations of the High Level Panel of Experts of the Committee on World Food Security

Background and objectives: The High Level Panel of Experts on Food Security and Nutrition (HLPE) is the United Nations body for assessing the science related to world food security and nutrition. It is the science-policy interface of the Committee on World Food Security (CFS) and provides independent, comprehensive and evidence-based analysis and advice through a scientific, transparent and inclusive process, grounded the principle of food/nutrition as a human right.

Methods: Policy recommendations concerning the Mediterranean diet specifically, and sustainable diets generally, extracted from the 18 reports of the HLPE, are presented. Emphasis is given to nutrition and food systems, agroecology, biodiversity and ecosystems, climate, the role of livestock, critical and emerging issues.

Results: Focussing on human nutrition and environmental/ecosystem sustainability, a range of specific policy recommendations are presented covering global levels with the Mediterranean diet as a model for sustainable diet, to local levels with focus on the Mediterranean basin. Two new dimensions to the formal definition of food security are discussed: 'sustainability' and 'agency'. Sustainability is the fundamental, indispensable element that requires immediate actions in the present to safeguard the future of food security and nutrition. Agency is the element that enables/facilitates individuals and communities to use their own power to effect change, even when top-down political will is ineffectual.

Conclusions: Regardless of the thematic emphasis within the broad subject of the Mediterranean diet and food security and nutrition, urgency of action is the common, but heretofore neglected, call. The Covid-19 epidemic and the war in Ukraine, have sharpened to the focus on the imperative of urgency related to food security and nutrition, in the Mediterranean and beyond.

GAME-CHANGING SOLUTIONS FROM LESSONS LEARNED FROM WOMEN, YOUTH AND INCLUSIVE SUSTAINABLE LIVELIHOODS IN THE MEDITERRANEAN COUNTRIES

Moderators: **Wafaa El Dikah**, Senior Gender Expert, CIHEAM Governing Board -Lebanon.
Maroun El Moujabber, Chair of the Scientific Advisory Committee PRIMA Foundation, CIHEAM Bari
Rapporteur: **Vasia Madesi**, Yellow Window

Objective: Addressing gender & generation aspects in the Mediterranean diet to optimize research to a more sustainable and resilience food system approach in line with the Agenda 2030.

Expected outcomes

This session will set the stage for addressing gender & generation aspects in the Mediterranean diet to optimize research to a more sustainable, equitable and resilient food system approach in line with the Agenda 2030. This session will address gender inequalities across the food system amid an unfair deeply rooted socio-economic context and higher fragility to climate change impacts, revealing women farmers pivotal role to food systems and in producing healthy and nutritious food. The session is expected to put forward practical recommendations for establishing an inclusive, sustainable, and resilient food systems through adoption of stronger gender responsive approaches.

From Fork to Farm it systemically presents and discusses the gender & generation aspects in each stage of the Mediterranean Diet Food chain to (better) include the perspectives of women and of male and female youth, and to disclosure and overcome gender inequalities & address the generation bias in research, in projects and support services. Examples to ongoing and new issues and urgencies around the Mediterranean diet will be highlighted as well as focus on existing legal barriers and gender gaps and the need to address them through policies and through adopting gender transformative approaches

The session addresses first the Fork by explicating the gender & generation aspects around meal sharing and preparation as parts of food culture, then second the Foraging or Collecting of ingredients, discerning aspects concerning buying and storing the ingredients from stores, markets or informal exchanges, sometimes from self-harvesting and processing, and the third stage the Formal retail, transport and trade, and then fourth the Factory or otherwise post-harvesting processing of ingredients if applicable, either industrial by food companies or SME in various business forms, or home-based for commercial or home use, or informal exchange, and lastly fifth the Farm which includes all activities around buying inputs, sowing, growing and caring, and lastly harvesting. By systematically peeling off this food system and including gender-responsive approaches & generation aspects in all its stages, an overview will last to serve a more inclusive research, development, and policies agendas.

MODERATORS:



Wafaa El Dikah

Wafaa El Dikah, Delegate of Lebanon to CIHEAM Governing Board, is an agriculture and gender specialist. She held several senior level responsibilities in the Lebanese public sector, in international platforms and regional programs including UN ESCWA, FAO, EU, WB. She promoted programmes and dialogue in key policy areas in agriculture, food security, social protection and women's advancement. She formulated regional and national strategies and action plans in sustainable development, gender mainstreaming, advocating for women's leadership in rural and political institutions and eliminating gender inequalities in policies and legislations in Lebanon and the Arab Region.



Maroun El Moujabber

Dr. Maroun El Moujabber, from 2005 to date, is an Officer and the Coordinator of the Doctoral platform at CIHEAM-Bari. Author of several scientific publications, he has more than 20 years of experience in research, cooperation, and development projects. He is coordinator of CURE-XF Project on Xylella fastidiosa, and CIHEAM-Bari's representative in: LEAP-AGRI, Gender-SMART, FOSC. Since February 2022, he is the Chair of the Scientific Advisory Committee of PRIMA.

RAPPORTEUR:



Vasia Madesi

Vasia Madesi is an experienced professional in EU project management, with a specialisation in coordination and support of European Research and Innovation projects. She is a Consultant at Yellow Window. She holds a BSc in Political Sciences from the Aristotle University of Thessaloniki and an MSc in Political Theory and Philosophy. Since 2014, Vasia has participated in the implementation of several research and innovation projects which cover various sectors, including entrepreneurship, innovation and technology with a gender+ and inclusion dimension. She is currently part of the Gender-SMART team.

PARTICIPANTS:



Margreet van der Burg

Dr. Margreet van der Burg is senior university lecturer/research Gender Studies at Wageningen University, the Netherlands. Her work includes gender and the development of agricultural educational and knowledge systems, family farming, agricultural and food iconography and heritage. Currently, she serves as daily project leader of the structural change programme within Science for and with Society programme (SwafS) of EU Horizon 2020 Gender-SMART. She is gender co-expert for output 5 of the NUFFIC Orange Knowledge Programme OKP-IRA Project. She is also the chair of the gender committee of the EU-Horizon -2020 project SPRINT on Sustainable Plant Transition Research.

From Fork to Farm: Gender & generation aspects backwards across the Mediterranean diet food chain

This presentation will set the stage for addressing gender & generation aspects in the Mediterranean diet to optimize research to a more sustainable and resilience food system approach in line with the Agenda 2030. From Fork to Farm it systemically presents and discusses the gender & generation aspects in each stage of the Mediterranean Diet Food chain to (better) include the perspectives of

women and of male and female youth, and to disclosure and overcome gender & generation bias in current research, projects and support services. Examples are related to ongoing and new issues and urgencies around the Mediterranean diet.

The presentation addresses first the Fork by explicating the gender & generation aspects around meal sharing and preparation as parts of food culture, then second the Foraging or Collecting of ingredients, discerning aspects concerning buying and storing the ingredients from stores, markets or informal exchanges, sometimes from self-harvesting and processing, skipping the third stage the Formal retail, transport and trade, and then fourth the Factory or otherwise post-harvesting processing of ingredients if applicable, either industrial by food companies or SME in various business forms, or home-based for commercial or home use, or informal exchange, and lastly fifth the Farm which includes all activities around buying inputs, sowing, growing and caring, and lastly harvesting. By systematically peeling off this food system and including gender & generation aspects in all its stages, an overview will last to serve a more inclusive research agenda.



Sandrine Dury

Sandrine Dury is an agricultural economist at the Centre of agricultural research for development (Cirad) for 20 years. She has been working on the linkages between food and nutrition security and farm production with several African partners. She managed the economic work package of the Medina Project (2013-2017) in Tunisia and the Relax project (2017-2021) in Burkina Faso, exploring linkages between agricultural, wild resources & food consumption diversity in order to understand why higher crop production does not always translate into better nutrition for women.

Food security of women in farming households: a case study in Central Tunisia

Rural areas show different forms of poverty and food insecurity. We explore the nature of food insecurity and its linkages with different causes such as the livelihoods of women, or the structure and activities of the farms, including the diversity in the production systems. In 2015 nutritionists and agricultural economists, conducted several surveys within farms in the Sidi Bouzid area to assess these linkages. We showed that more than 40% of women reported experiencing some form of food insecurity. An increase in farm production is essential but not sufficient to achieve food security. Access to non-agricultural incomes is essential in achieving better food security. We also showed that the dietary diversity, on another important indicator of food security, is linked to diversity of productions.



Amel M. Azab

Amel M. Azab, from Egypt, graduated in 1996 from Irrigation and Hydraulics Department, Faculty of Engineering, Cairo University. MSc. holder in Water Resources Management and was awarded her PhD Degree in Surface water quality management from UNESCO-IHE and TU-Delft, the Netherlands in January 2012. She Joined the Arab Water Council (AWC) in 2018 as an expert to support the design and structure of the Network for Arab Women in Water (NAWW), and in 2021 she joined AWC as the coordinator of the SDG Climate Facility Project. Dr. Azab has more than 18 years of experience in regional and international cooperation.

Climate Change, and Resilience from a Gender Perspective: Challenges and Best practices from the Arab Region

Our world is currently facing many crises, with climate change and extreme weather events being among the biggest threats to development globally. In the Arab region, climate change presents a significant development threat, Combined disasters are increasing and affecting our region where we are facing po-

pulation growth, water scarcity, food shortage, pandemics, economic crises, wars and conflicts in addition to the growing concerns of climate change and extreme events. The different global agendas; The Paris Declaration 2015, the SENDAI Framework on Disaster Risk Reduction 2015, Agenda 2030 and the Sustainable Development Goals creates concrete framework for conceptual and operational links and coherence across these issues to achieve sustainable development. Moreover, these instruments clearly indicate that the systemic drivers of vulnerability and impacts of compound risks differ across heterogeneous population segments, sectors, occupations and geographies, and clearly identify women as a priority group whose structurally-determined vulnerabilities to these issues and capacities need to be well addressed. Women constitute almost half the population in the Arab region. In their gendered roles and significant presence and role in the agricultural sector which is most sensitive to climate change, extreme weather events and disasters, women make a critical contribution to agriculture and development, whether they are migrants or 'stay behind' members of migrant households. Women, in their domestic roles, as small-scale low-emission subsistence farmers, small livestock raisers, gatherers of forest products for subsistence, producers, providers and managers of food, water and natural resources, and as consumers of less-emissions intensive goods can be survivors and resilient groups by nature. Moreover, they are front lines responders in disasters, and reliable transmitters and key family supporters in crisis. Yet, their location at the lower ends of value chains in agriculture, manufacturing and other sectors and their disproportionate marginalization from ownership and control over material and non-material resources can severely diminish their resilience to climate risk and migration for survival relative to men. Research and case studies in the region shows that women are the strong frontlines of their families as they play a critical role in relation to climate change adaptation and mitigation strategies as well as disaster prevention that is often gone unnoticed and undocumented while their priorities are seldom addressed. Therefore there is a need to highlight their best practice, to ensure social protection for women and girls and food security in the context of climate change and disasters, with particular attention and support to women in remote and rural areas, refugees, migrants and displaced women; and it is also important to undertake research, studies and gender sensitive data collection on climate change, gender equity and women's empowerment to better understand their status and needs in order to develop the appropriate climate mitigation and resilience policies that ensures their rights and livelihoods.



Rosanna Quagliariello

Head of External Relations and Communication at CIHEAM Bari. She is in charge of the relations with national and international governmental, academic, scientific & cooperation Institutions. She coordinates Center's communication activities and developing strategies to maximize the visibility of projects and institutional initiatives. She is involved in several international cooperation projects for the promotion of gender equality and women's empowerment.

Mediterranean diet: from gender issues to environmental sustainability

Food with its history, its written and unwritten rules, its social implications and economic spin-offs, definitely has a substantial 'gender' dimension.

The aim of this talk is to analyse this dimension and assess the extent to which it has, or could have, an impact on the achievement of genuinely sustainable development. The focus is, of course, on the Mediterranean diet which - more so than any other - stands for a lifestyle, besides a way of eating. The culture of eating, the relationship with food, the methods used in its production, are also expressed through the attitudes and practices that each individual puts in place and that vary influenced by the most diverse and sometimes unexpected factors. Mastering these factors and addressing them means bringing about important and, often, underestimated changes; it means inquiring into good practices and attempting to adopt them in order to advance on the path of change also and, in particular, in these troubled times and in the light of the unprecedented crisis the world is facing.



Stefano Magno

More than 2000 breast cancer operations performed at FPG in Rome; Head of the Center for Integrative Oncology at FPG; Professor in a National Educational Program on cancer prevention promoted by Komen Italia; Scientific coordinator of Master "Integrative therapies in female cancers" at Catholic University



SCIENCE DIPLOMACY, KNOWLEDGE, EDUCATION, AND EMPLOYABILITY FOR EMPOWERING THE MEDITERRANEAN YOUTH

Moderator: **Giuseppe Provenzano**, Higher Education and Research, UfM

Rapporteur: **Yasmine Seghirate**, CIHEAM Paris

Objective: to identify how cooperating on knowledge and skills can make food systems more sustainable and employable

Knowledge and skills are essential tools for empowering the Mediterranean youth and innovate our economic systems towards sustainability. This applies more than ever to food systems in the Mediterranean which needs to achieve a greater degree of resilience in face of growing climate threats, unprecedented disruption in food chains, economic challenges (especially for smallholders), and youth unemployment contributing to the deep roots of migration.

This requires the full involvement of higher education and research centres in order to mobilise the youth and empower it, by advancing science, raising awareness on the challenges, and offering new skills to what is effectively the most educated generation ever in the Mediterranean. Especially if we consider that in the Mediterranean unemployment is highest among graduates, reaching an average of 30% across the region.

UfM has partnered with FAO, CIHEAM and PRIMA in the last years for promoting the sustainability of food systems, highlighting the importance of “bridging the gap between Science, Policy and Business requires investing in specific competences and professional figures, such as innovation brokers and science diplomacy advocates, to facilitate an innovative ecosystem, connect with local needs and enhance the transfer of knowledge from research centres to applied fields”.

This session will explore the contribution of higher education and research in supporting a shift towards more sustainable food system models in the Mediterranean, by showcasing some key items in their toolbox, which contribute to support our youth.

Science diplomacy, knowledge sharing, research and innovation. Science diplomacy has long been an instrument for finding a common ground across Countries, finding ambitious initiatives where working together achieves more than the sum of its elements, and lays the foundation for mutual understanding and peace.

In the Mediterranean, scientific cooperation means sustainability, from environmental, economic and social standpoints. The Mediterranean has seen the development of joint initiatives such as PRIMA and BLUEMED, which have tried to make our food more sustainable from land and sea, MEDECC that has tried to assess the impact of climate change on the region, among many others. Bringing further focus on this topic, this year marks also the first UfM Ministerial Declaration on Research and Innovation, where 42 Ministers of R&I endorsed three research roadmaps on topics closely connected to the sustainability of food systems: climate change, renewable energy, and health.

- Education, skills and employability for the Mediterranean citizens. In modern societies, education has contributed to support social mobility from one side, to the other it has cultivated the human

capital of the region by increasing the skills of its future workforce.

The new challenges created by the need of adapting food systems to the future offer the opportunity of exploiting the potential of a very young region, especially in its Southern Shore, equipping them with useful skills and knowledge for supporting this transition. This requires a deep reflection on skills, curricula, study paths, and crucially a dialogue with the private sector in order to support the role of academia in contributing towards the local development, especially since 32% of enterprises in the Southern Mediterranean consider skill gaps as a major constraint to hiring .

MODERATOR:



Giuseppe Provenzano

Giuseppe Provenzano is Project Manager on Higher Education and Research at the Secretariat of the Union for the Mediterranean, focusing on research, innovation and employability. He has promoted a UfM initiative “Reinforcing the innovation-employability nexus in the Mediterranean”, has supervised and authored publications on employability, innovation and science diplomacy, and external EU policies.

RAPPORTEUR:



Yasmine Seghirate

Yasmine is an administrator at the CIHEAM GS in charge of the communication, publications. She works on youth and women empowerment issues. Graduated in Political Science, she worked before for the French CSR Observatory, the UN Deputy SG for Innovative Financing and the French Development Agency.

PARTICIPANTS:



Mohamed El-Shinawi

Prof. Mohamed El-Shinawi is the Co-Chair of the Partnership for Research and Innovation in the Mediterranean PRIMA. he is in charge of all International relations and agreements in the Ministry of Higher Education and Scientific Research of Egypt. With more than 80 peer-reviewed publications and more than 70 oral and poster presentations worldwide, he is a distinguished professor in the field of breast cancer, trauma, and general surgery.



Sonia Abdelhak

Dr Sonia Abdelhak is head of the Research Laboratory on Biomedical Genomics and Oncogenetics at Institut Pasteur de Tunis. She was a member of UfM Health Experts Group and member of the Advisory Group on R&I for Africa-Europe cooperation. Dr Abdelhak is also the chair of an NGO, Research in Action.

The UfM R&I Agenda, Health and its Sustainable Food Systems connections

Research and innovation are vital for progress. Research provides policymakers a scientific basis and evidence for decision making to face challenges and innovation unlocks the potential of sustainable growth. With the help of experts' groups from both shores of the Mediterranean and after multiple stakeholders consultations, the UfM has established an agenda and roadmaps including the strategic activities that must be supported for promoting Research and Innovation (R&I) in each of the three areas that have been identified as strategic in the Euro-Mediterranean region: Health, Renewable Energies and Climate Change. This was a successful and concrete example of science diplomacy aimed to achieve long-term capacity development for the region, with significant social impacts.

Some recommendations were proposed including promoting technology cooperation via demonstration transdisciplinary projects on sustainable development in the region. Cooperation on resilient and sustainable food systems overlaps all three priority areas and will be of a great benefit for the health of Mediterranean populations.



Damiano Petruzzella

Damiano Petruzzella is Scientific Administrator of CIHEAM BARI, Coordinator of the Unit "Youth Entrepreneurship and Innovation Ecosystem". Responsible of the Mediterranean Incubator for Business Creation and the MIP Network - Mediterranean Innovation Partnership. He is Scientific Coordinator of the Master in "Open Innovation and Youth Entrepreneurship".

Redesigning the supply chain of skills for the transition of the food system

The economic context outlined in recent years is increasingly placing companies in front of scenarios characterized by constant change and innovation. The challenge is to invest in human capital to develop new skills in a regenerated innovation chain that integrates training, research and entrepreneurship in an "agile interactive system". With the Master in "open innovation and youth entrepreneurship in the Mediterranean agrifood sector", Ciheam Bari is actively contributing to this cultural change. This Master' program adopts a learning-by-doing methodological approach that interactively engages students, companies and researchers. The students learn to solve complex business challenges by experimenting with problem-solving methodologies of Design Thinking and Lean Startup. The students design in an agile way by developing prototypes to give concrete form to their ideas. The goal is to create a new generation of young innovation managers and innovation brokers, but also a new culture of innovation among entrepreneurs and researchers. This will enhance the creation of a regenerated innovation chain based on an integrated interactive system between training-research-business, thus eliminating the borders between them.



Roger Albinyana

Roger Albinyana is the Managing Director of the European Institute of the Mediterranean (IEMed). He's also an associate professor at the Faculty of Economics of the University of Barcelona, where he teaches international economic policy. Roger is also a board member at CIDOB (Barcelona Centre for International Affairs) and a member of the Advisory Council of the Euro-Mediterranean Economists Association (EMEA). Prior to joining the IEMed, Roger served as Secretary General for Foreign and EU Affairs of the Government of Catalonia (2013-2016) and was a member of the EU Committee of the Regions.

How can science diplomacy facilitate education to work transition?

There are two major elements that assess the impact of education investment into economic growth; the first one is the quality of the public investment in education by measuring not only public expenditure on education but also educational attainment and educational achievement; whereas the second one is the capacity of job markets (such as those connected to agri-food) to absorb graduated students. In this regard, education is the main instrument to favour social and economic mobility, and the lack of progress in some of these indicators might help perpetuate substantial inequality of opportunity in education, which in the case of our region is hindering progress in human development.



Gennaro Migliore



Giulia Marchesini



Alicia Perez-Porro



INNOVATIVE COOPERATION APPROACH BETWEEN RESEARCH AND ENTERPRISES IN SFS MED: OPEN INNOVATION ECOSYSTEMS AND LIVING LABS

Moderators: **Lamiae Ghaouti**, Institut Agronomique et Vétérinaire Hassan II; **Teodoro Miano**, University Bari

Rapporteur: **Damiano Petruzzella**, CIHEAM Bari

Objective: to compare skills and experiences to overcome the limits of current models and provide concrete guidance to improve the cooperation between research and enterprises in SFS MED.

The unequal economic drift between Northern and Southern-Eastern Mediterranean countries, the low level of competitiveness of business, the limited collaboration between research and private business, the weak policies and services to support technology transfer and business creation, and the waste of knowledge, require a change in culture of innovation among all the actors of the innovation ecosystem in order to foster business development, to promote job increase and resilience, in particular for the new generations.

The session concerns a very challenging theme about a novel paradigm of interaction between the institutional research systems and the enterprises, a novel methodology driving the scientific, technological and cultural transfer and a productive transformation of knowledge and innovation which involves new co-designed processes between scientists and private companies (open innovation approach). A change of paradigm that includes a re-direction of the current scientific isolation with a better defined definition of company issues and problems.

The challenge is to develop models and activities that moves the research bodies towards a direct interaction with private companies, with the paramount goal of promoting economic and social growth of the territory, electing the knowledge sharing the instrumental tool for obtaining social, cultural and economic benefits. The winning approach creates models based on systematic user co-creation approach, integrating research and innovation processes in real life communities and settings. The strategic target of this fundamental change, reached out through the transformation or the partial conversion of the scientific knowledge into solution oriented knowledge applied to real cases, is the promotion of social and economic growth.

This is going to strengthen the relationships, to reinforce networking at various levels, to overcome cultural barriers and build a new culture of innovation and new professional profiles, to adopt "open" models that involve all the actors of the ecosystem (quadruple helix approach - Living labs), mainly young people, at last to find the most effective "keys" with respect to the diversity of socio-economic and territorial contexts.

Open Innovation proposes a very novel methodological approach of analyzing and facing complex relationships existing in our society among the extremely wide range of bodies and individuals. Each of them assumes the role of actor, and all together compose the final "piece". In addition, the cross-contaminated contest produces a new class of individuals, specifically educated and trained to plan and co-design solutions by matching the issues raised by the production systems with the skills and the inventions generated by the scientists.

MODERATORS:



Teodoro Miano

Teodoro Miano is full Professor of Agricultural Chemistry at the Department of Soil, Plant and Food Science of the University of Bari Aldo Moro. The wide international academic career together with the long-term CIHEAM experience allowed Teodoro Miano to complete professional characteristics, networking capacities and an international visibility specifically oriented to the Mediterranean Area.



Lamiae Ghaouti

RAPPORTEUR:



Damiano Petruzzella

Damiano Petruzzella is Scientific Administrator of CIHEAM BARI, Coordinator of the Unit "Youth Entrepreneurship and Innovation Ecosystem". Responsible of the Mediterranean Incubator for Business Creation and the MIP Network - Mediterranean Innovation Partnership. He is Scientific Coordinator of the Master in "Open Innovation and Youth Entrepreneurship".

PARTICIPANTS:



Omar Bizri

Senior consultant on science, technology and innovation policies for sustainable development with focus on the Arab countries. A researcher in molecular spectroscopy, lectured at several universities before joining the United Nations in 1993 to work on projects aimed at technology for sustainable development. Authored several articles and three books since his retirement in 2007.

Preliminary Analysis of Agricultural and Agro-food Processing Activities in the Eastern and Southern Mediterranean Arab countries; Technology, Research and Development

Conditions, through which Eastern and Southern Mediterranean Arab (ESMA) countries have recently been going through call for in-depth reviews of past practices and earnest efforts towards fresh and enlightened policies. Radical reforms are especially needed in current practices for the development of agricultural and agro-food processing sectors, with emphasis upon tackling the needs of marginalised and impoverished populations as well as refugee and internally displaced communities as top priorities.

Adoption of "open" models that involve all the actors of targeted ecosystems, as in the Quadruple Helix and Living Lab approaches, whereby people of all ages rather than just young people, would need to be placed as a priority in finding "keys" that are more effective with respect to the diversity

of socio-economic and territorial contexts. However, the design and implementation of such models would require research efforts aimed at:

- In-depth analysis of current innovation models and comparing measures taken to overcome their limitations;
- Development of effective tools aimed at improved cooperation among all community actors and beneficiaries and not just research facilities and national/local enterprises.

Steps taken in these directions would greatly benefit out of the active involvement of the widest range of potential stakeholders within the Mediterranean innovation ecosystem.



Isidora Stojacic

Isidora Stojacic works as a project manager at BioSense Institute, experienced in EU funded projects focused on Digital Agriculture and development of ICTs for AgriFood value chain. Since 2019, she has been the main contact person of the Agricultural and AgriFood Working Group of ENOLL. Some of her main activities were Living Lab methodologies and tools as well as the concept of a Living Lab being transferred to the AgriFood industry.



Damiano Petruzzella

Damiano Petruzzella is Scientific Administrator of CIHEAM BARI, Coordinator of the Unit "Youth Entrepreneurship and Innovation Ecosystem". Responsible of the Mediterranean Incubator for Business Creation and the MIP Network - Mediterranean Innovation Partnership. He is Scientific Coordinator of the Master in "Open Innovation and Youth Entrepreneurship".

To empower the innovation chain process and new professional profiles

One of the main obstacles to innovative processes is the distance between research results and the adoption of new practices. This is made even more complex in the Mediterranean characterized by a strong structural weakness of the innovation chain. The Mediterranean countries at very low levels of innovation. To respond to this criticality, an overall review of all the elements that come into play in the innovation chain is necessary, such as research, knowledge transfer, consultants (services), business world, training and the "advanced support technologies" which provide the system with data, information (AKIS). A new paradigm based on interactive innovation system, innovative proposals come from science, but also from practice and intermediaries. The experiences, from Living Labs (Open innovation approach) to EIP-AGRI (EC, PSR, 2014-2020) have brought out the greater effectiveness of the interactive system, generating solutions that are better suited contexts, but also greater criticality: the creation of partnerships; sharing problems and innovative solutions; the interactive process of spreading innovation. These issues have aroused reflections by scientific experts who have highlighted the need for new professional figures, in particular that of the innovation broker with the functions of facilitating the interactive innovative path, but also more recently of corporate roles as innovation manager and innovation coach.



Marta Laranjo



Federica Bruni



Begona Perez Villarreal



Antonio F. Logrieco

Setting multi-stakeholder collaborative spaces to connect Enterprises with citizens, scientists and policy makers within the food (safety) system

The strong EC commitment to drive and accelerate the transition towards more sustainable food systems, (Farm to Fork strategy, European Green Deal policy) requires a mindset change in all actors of the system: to transform the system we need to move from in-silo thinking to multi-actor cooperation.

The Food System is a complex one, consisting of many interacting actors with different roles, tasks and responsibilities. Enterprises may play a central role providing their knowledge and tested best practices to set the basis for the implementation of new technological innovations.

Some recent experiences (including the FoodSafety4EU platform) provided the evidence that multi-stakeholder digital platforms can act as cooperation spaces, in which enterprises can engage with the other Food System actors (i.e. policymakers, scientists, civil society – up to individual consumer level) to co-design solutions, strategies, and models, to align their vision and reach common objectives.

This, indeed, can be achieved only through a structured dialogue, f.i. based on participatory processes including the living lab methodology, by which the →platform can offer a room for experimentation, cross learning and fertilization, leveraging the enterprises contribution to shape the Food System.



Giacomo Scarascia Mugnozza

Food Security and Precision Agriculture

Maria De Angelis, Giacomo Scarascia Mugnozza, Luciano Violante

New technologies, such as Precision Farming and Agriculture 4.0, are essential for achieving Food Security by means of the sustainable intensification of agrifood production, of the environmental emissions reduction, of the prevention of phytosanitary and climatic emergencies, and of the One Health guidelines on sustainable, healthy diets, such as the Mediterranean Diet.

Precision Farming is based on connectivity, data collection and processing.

The real-time monitoring of crop status, water, fertiliser and pesticide requirements, and prompt site-specific production controls can be carried out using remote monitoring systems, such as satellites and GPS, proximity monitoring systems, such as drones and sensors, and digital technologies, such as cloud computing, decision support systems, big data management, IoT, and artificial intelligence.

The reduced consumption of resources, such as fertilisers, pest prevention products, seeds, water (up to 70% water savings), energy, machinery and labour, will not only increase yields (approx. 10-20%), product quality, company profits, the logistics operations and traceability of the agrifood chain from producer to consumer, but will also subsequently increase sustainability and respect for the environment.



RESILIENCE OF FOOD SYSTEMS AND THE MEDITERRANEAN DIET IN TIMES OF CRISIS

Moderator: **Elliot M Berry**, Hebrew University

Rapporteur: **Eduardo Mocini**, Sapienza University of Rome

Objective: to provide solutions for coping with food insecurity and the erosion of the Mediterranean diet in times of crisis through a sociotype framework approach as ecological systems construct for increasing the resilience of food systems in the Mediterranean

Ensuring Food Security (FS) for all citizens is a fundamental human right and should be a policy for all countries. Dealing with Food Insecurity (FINS) is a challenge causing stress at many levels—national, household, and individual. The conceptual framework of the Sociotype has been developed as a summary ecological construct to organize the multiple, dynamic, reciprocal inputs from the environment that interact with the genotype to determine the expression of phenotypic behaviors such as coping with stress. The Sociotype ecological framework has three domains (with some examples): Individual (intra-personal, physical and mental health and well-being), Relationships (inter-personal, family, community, cultural systems and social media), and Context (socio-economic, political, environment - ecosystems)—and their interactions determine an individual's or a country's coping and resilience to adversity. We have applied the principles of the Sociotype to classify both the stresses of, and the coping strategies to, FINS in relation to the four values of the Mediterranean Diet 4.0. The stresses of FINS may occur at any place along the dimensions of the FS pathway—Availability (international, national level), Accessibility (household), Utilization (individual) in association with the time dimensions of Stability (short-term) and Sustainability (long-term).

The Mediterranean Sea as a major shipping and trade pathway is involved critically in food, commodities and energy supply chains. The current pandemic, geo-political unrest in Europe and consequent food and energy crises threaten FINS throughout the Mediterranean region (and world-wide). Food prices have increased leading to severe financial hardship especially, for the lower-socio-economic groups who may have to choose, in the foreseeable future, between “starving” or “freezing”. There may be political unrest throughout the region which, together, will harshly affect adherence to the Mediterranean Diet, its sustainability and North-South relationships. Flexible, new coping strategies will be required at each level of the Sociotype and at each dimension of FS. International Mediterranean cooperation, which was so successful in vaccine production, will be the cornerstone for combating the erosion of the Mediterranean diet and lifestyle, enabling country-specific protocols to prioritize and deal with short-term disasters (such as new pandemics and natural / man-made misfortunes) and to plan long-term sustainability programs to ensure water management and mitigate climate change towards the SDGs.

The aim of our session is to harness the sociotype framework to help identify the stresses of food insecurity through discussing different at-risk situations including – man-made disasters, livelihoods of fisher folk, women's empowerment, old age, and adherence to the Mediterranean diet. We shall then examine some of the coping strategies needed to relieve FINS at the different levels of the sociotype. Coordinated responses will be needed from all the actors – such as are present at this meeting – to apply the conclusions from the Sustainable Food Systems dialogues in order to increase the resilience of food systems in the Mediterranean.

MODERATOR:



Elliot M. Berry

Berry has been a Scientist at Rockefeller, MIT, and Cambridge, Professor at La Sapienza, FAO and Yale Universities, and Director of the School of Public Health at the Hebrew University. He has authored over 300 publications including co-editing the Encyclopaedia on Food Security and Sustainability.

RAPPORTEUR:



Eduardo Mocini

PARTICIPANTS:



Lorenzo M. Donini

Lorenzo M. Donini graduated in Medicine and Surgery. He is Full Professor at the “Sapienza” University of Rome, head of the Research Unit on “Food Science and Human Nutrition”, director of the Specialisation School in “Food Science and Nutrition”, and president of the “Gastronomic Sciences” degree course. He coordinated different research projects and published more than 200 papers in extenso and more than 40 chapters of books relevant to malnutrition, obesity, nutritional status, hospital catering and eating behavior.

Promoting the Mediterranean Diet through a bio-psycho social and sociotypic approach

The enhancement of the sustainability of MD and its adherence should consider 1) its longitudinal vector (involving the individual called to make healthy and sustainable choices, the family/social relationships and living environment in which these choices must be favored, and the institutional context that must promote a healthy and sustainable development model for collectivity and the planet) and 2) its transversal vector (involving the four domains of sustainability: socio-cultural, economic, environmental, health-nutritional) dimensions. Together, these can represent important driving forces for bringing people back to greater adherence to the Mediterranean eating pattern.



Alessandro Galli

Alessandro Galli works as Senior Scientists and Mediterranean-MENA Program Director at Global Footprint Network, analyzing human dependence on natural resources and ecological services through the use of sustainability indicators and environmental accounting methods. Since 2008, Alessandro has been working with government agencies and NGOs in USA, Europe, Latin America and the Middle East. Alessandro has authored more than 50 peer-review articles and acted as reviewer for some 20 academic journals.

Leveraging consumer attitudes and knowledge concerning fish and seafood consumption as part of resilient food systems in the Mediterranean – data from three countries

The ultimate characteristic of a resilient food system is the co-existence of human and planetary benefits: co-benefits. A resilient food system is thus one that supports human health and well-being while staying within planetary limits. Against this set goal, the current reality in the Mediterranean is that of primarily unsustainable (highly industrialized and relying on long supply chain), unfair (in providing appropriate revenue to food producers), unequal (in securing short and long term access to food to all), unbalanced (towards ultra-processed, animal-protein-based and sugar-rich foods) and linear (in terms of food waste and loss) food systems.

Considering dietary choices as the ultimate indication of the sustainability of food systems, and that dietary decisions by consumers can cause a positive cascade effect throughout the whole food chain, here we explore the role of consumers' attitudes towards, and knowledge of, food alternatives as possible levers to help transitioning towards sustainable food systems. We focus on fish and seafood consumption in 3 pilot countries, Croatia, Italy and Turkey. Results indicate the need to increase efforts at each level of the sociotype - Individual, Relationships, and Context - to ease a transition towards more fair, sustainable and resilient food systems.



Suzanne Piscopo

Suzanne is a nutritionist, home economist and health educator, and an avid promoter of the Maltese-Mediterranean diet and its benefits for health and sustainability. She is co-ordinator of Fonzu l-Fenek, the well-loved local mascot promoting healthy, sustainable behaviours among young children.

From fun to care, from me to everywhere: Educating children about a Mediterranean Diet pattern of healthy, sustainable eating within a Sociotype framework

Establishing healthy lifestyles, including healthy sustainable diets, in the formative Primary school years might help prevent health problems along the lifecycle, whilst also respecting various sustainability dimensions. Emerging research on Food Literacy stresses this by emphasizing food education for behavior change to benefit oneself, other people and the planet. Therefore, Primary level education about a Mediterranean Diet pattern of healthy, sustainable eating can be set in a sociotype framework where factors at different levels of the environment (Context) are considered. With children at the centre (Individual), also influencing their families (Relationships), we propose a curriculum plan designed around the four elements of responsibility, frugality, creativity and enjoyment and the role of intrapersonal, interpersonal, community and global influences on one's dietary choices and behaviours. The program will adopt an active learning approach where real-world scenarios and the complementary roles of the formal and informal curricula and the school community are integrated. The aim is to nurture attitudes, knowledge and skills among young Mediterranean children where action and entrepreneurship for healthy, sustainable eating and lifestyle are valued and implemented



Dorit Nitzan

The war as a stimulus to get back to the roots- transforming the Mediterranean food systems

The war in Ukraine poses serious threats to global food security in general, and the Mediterranean Diet, in particular. However, it may also provide an opportunity to rejuvenate Mediterranean food

systems and build them BACK, better.

Each of the 22 Mediterranean countries serve as a "food road" to the rest of the globe, because their food systems are based on diverse natural resources and well-grounded agricultural and dietary traditions. However, many of these countries still depend on cereal importation which has been severely interrupted by the war. Alternative grain supplies should not be considered, as they might deepen the food insecurity in Ukraine whose wellbeing is dependent on exports. Ukrainians need reassurance that the Mediterranean Region will not desert them.

The following plan of actions, based on the sociotype model of individuals, relationships and context, is suggested:

1. Individuals and family relationships: to utilize cereals better, by decreasing their waste and spoilage. Moving towards daily bread baking and traditional recipes.
2. Context: communities: to promote the consumption and access to all of the Mediterranean diet, through health promotion and price controls of basic foods.
3. To better manage natural resources, such as water, and minimize the use of fertilizers.
4. To support other countries by increasing exports of available food.

The resilience of Mediterranean food systems depends on their sustainability, since by changing one factor, the entire dietary web might collapse. Regional, coordinated approaches with research and assessments, including global needs, are required to integrate Mediterranean food systems, according to One Health demands, while including Ukraine in their planning.



Rekia Belahsen

Chouaib Doukkali University, Faculty of Sciences. El Jadida - Morocco

Food security and women's empowerment in times of crisis (COVID-19)

With food at the intersection of biodiversity, climate change, human health and livelihoods, unsustainable consumption and production patterns are major drivers of environmental deterioration, affecting the food security of populations. This situation is accentuated by demographic pressures in times of crisis, with interruption of the food supply chain, due to COVID-19 and geopolitical conflicts, resulting in higher food prices, inflation and falling incomes.

The COVID pandemic has led to an increase in food insecurity, undernourishment and vulnerability to infections especially among people suffering from diet-related diseases (such as obesity diabetes and heart), who have been more affected by the virus. This indicates poor dietary quality and hence the need for diet improvement.

We discuss measures to adapt to these crisis situations in Morocco according to the sociotype domains. Context: politically, solutions included agricultural support, rethinking food sovereignty, safety nets, and commodity subsidies. Relationships: a revealed asset was empowerment/education of women, their involvement in agricultural policies, and strengthening their role in protecting resources and biodiversity with impacts on income and in safeguarding culinary heritage and health benefits (Individual domain).



Antonia Trichopoulou

Antonia Trichopoulou , President of the Hellenic Health Foundation, Professor Emeritus of the University of Athens. Her scientific work focuses on public health and nutritional epidemiology, emphasizing health effects of the Mediterranean diet and traditional foods. She has received numerous awards. In 2011, she received the FENS Award for her "outstanding nutritionist career". Named in Thomson Reuters 2014 "World's Most influential Scientific Minds" List and awarded as a Highly Cited Researcher by Clarivate Analytics in 2018 and 2021 and decorated with the Golden Cross of Honour by the President of the Greek Republic.



CITIES AND LOCAL GOVERNMENTS FOR FOOD SYSTEMS TRANSFORMATION

Moderator: **Florence Egal**, International Expert, Territorial food systems and Urban-Rural Linkages
Rapporteur: **Francesca Volpe**, CIHEAM Bari

Objective: to discuss the role of Mediterranean cities and local governments in food systems transformation, the implications in terms of multi-level food systems governance, and the importance of cities networks.

The last decade has seen the emergence of cities and local governments in food systems transformation. It confirmed the importance of urban-rural linkages for territorial development and of food systems transformation as a pre-requisite for sustainable development. The role of small and intermediate cities will be a priority in the coming years, as they play a key role in connecting rural and urban areas and are projected to grow much faster than megacities, driven by population growth and rural-urban migration. The COVID19 crisis and recent conflicts have confirmed the role of cities at the forefront of crisis management and sustainable food systems as essential dimensions of resilience.

The cities selected will present their experience and lessons learnt in terms of metropolitan food systems governance, with specific attention to participation of local actors, collaboration with national or international institutions, and networking with other cities or local governments. They will identify key opportunities and challenges and present their vision of the way forward.

A variety of cities and local governments networks have developed in the last decades, but food has only recently emerged as an obvious integrating topic. These networks bring on the one hand experience and resources, and on the other hand can benefit from engaging more effectively in food systems transformation.

The 2021 UN Food Systems Summit has reiterated the role of the UN System to support Food Systems Transformation. The UN Food and Agriculture Organization (FAO) and the UN Human Settlement Programme (UN HABITAT) are logical partners to join forces to learn from cities and local governments, ensure coherence with national policies and provide technical assistance, but the present institutional structure of the UN generates challenges, since the Mediterranean shores, in spite of their common bioregional characteristics, are parceled out in different regional areas in which they often remain marginal.

Cities and local governments can also benefit from a variety of urban and local food systems networks (national, international, thematic...). Mediterranean cities and local governments are no exception and often belong to several networks but synergy for food systems transformation remains a major challenge.

MODERATOR:



Florence Egal

Florence Egal, MPH, worked with FAO 1990-2013 on food security, nutrition and livelihoods in both development and emergency contexts. Engaged from the early 90s in Food for cities matters. Upon retirement she assisted in the development of the Milan Urban Food Policy Pact and in UN Habitat's urban-rural linkages programme. She participated in the 2 previous conferences on the Revitalisation of the Mediterranean Diet.

RAPPORTEUR:



Francesca Volpe

Francesca Volpe is consultant at Ciheam Bari working on urban food system transformations. Within the EU Foodshift2030 project, she leads the Food accelerator Lab of the Metropolitan City of Bari, which delivered the Manifesto for the food system transition at metropolitan level. For 15 years, she managed technology transfer at the Apulian agrifood technology district.

PARTICIPANTS:



Mohammed AlShaqra

Mohammed AlShaqra, a Palestinian civil engineer, a certified UNRWA Alumni in Project Management, US Embassy Exchange Program Alumni and World Economic Forum Global Shaper. I work as the International Cooperation Coordinator at the Municipality of Gaza, where I am responsible for building relationships with a wide range of stakeholders including UN agencies and international NGOs for the purposes of developing international programs, in terms of common interests.



Aida Robbana

Aida Robbana, Economist, has supported UN and UNDP country offices in the areas of Results Based Management, Human Rights, Theory of Change and Design Thinking for Development. She is a Lead facilitator for the UN staff in Tunisia and worldwide. In January 2020, she joined the UNDP Tunisia office as a Program Specialist for the integration of sustainable development goals and innovation. In 2021, Aida joined UN-Habitat as Head of Office in Tunisia where she is in charge of the portfolio development, working on urban issues and supporting the SDG 11 Data collection.

Urban-rural linkages for sustainable development

Food systems are at the heart of territorial development and cities have a key role in the transformation of food systems. This has become a central dimension of our collaboration with FAO and we have learnt a lot from the Urban Food Systems dialogue held in Tunis in 2021. Tunis is a good example of the challenges faced by Mediterranean cities. It has been severely affected by the pandemic, which according to World Bank estimates of June 2021, is responsible

for an increase of the poverty rate from 15,55% to 21%. The diet is highly dependent on imported cereals, and in particular wheat, with an average annual consumption at about 174.3 kg per person which are further affected by the Russia-Ukraine conflict.

UN-Habitat is supporting the efforts of the municipalities of Tunis and neighbouring La Marsa to improve food systems for homeless and migrants, thus providing living labs for other municipalities to learn from.

UN Habitat is also supporting a variety of interventions which contribute to food systems transformation, such as waste management in Sousse and Tunis, public places and sustainable inclusive spaces and markets.



Cecilia Marocchino

Bio Cecilia Marocchino

Engaging local governments in the overall food systems transformation: key highlights from the FAO's urban food systems work

Urban inhabitants consume about 70 percent of global food production, which means that sustainable transformation of urban food systems can leverage the overall sustainability of agri-food systems. Many urban and peri-urban communities, especially in middle and low-income countries, are exposed to food insecurity and malnutrition including increasing overweight and obesity, and the diffusion of diet-related non-communicable diseases. An FAO global survey (2020) has clearly demonstrated the enormous, active role that cities and local governments have played in attenuating the effects of the COVID 19 pandemic on their citizens' health and food and nutrition security of urban poor. Moreover during the UN Food Systems Summit, it was clearly recognized the role of cities and local governments as a key player for promoting sustainable food systems transformation. Often, however, the actions at the local level are not sufficiently supported by corresponding actions, coordination, and resources at the national level while the policy space of urban and local governments is, in most cases, limited.

How do we change this? How do we make sure that cities receive adequate support to continue playing their active role of integrating food systems in their policy, planning and actions? Key highlights from the FAO's urban food systems work at global and local are:

- For successful transformation of food systems, national policies and local actions have to be congruent. The current policy framework is, in most of cases, fragmented. A vertical integration of policies and programmes requires multi-level, multi-scalar food governance systems from the national to the local. This is what FAO is promoting at global level, facilitating, in partnership with the Global Alliance for Improved Nutrition-GAIN, the Global Urban Food Systems coalition which includes UN Agencies, city networks, state and non-state actors.

- Local governments need to provide leadership in urban food policy development using a systems approach: it involves developing holistic food strategies and integrating food systems in urban planning but also play a fundamental role in integrating food systems actions into a broader territorial approach through strengthening links between (multiple) urban and rural areas. FAO is supporting a number of cities, including Mediterranean cities, in mainstreaming food systems in local policy, planning and actions through different entry points (e.g. food waste management, food retail environment, public procurements and short supply chain).

- Peer-to-peer exchange is a fundamental strategy to advocate for urban food systems transformation

and scaling up initiative. FAO is currently in the process of promoting city-to-city exchange (through South South and Triangular Cooperation) involving cities in Morocco, Tunisia and France.



Luigi Ranieri

Bio Luigi Ranieri

The Metropolitan city of Bari towards its local food policy

Following the Milan Urban food Policy Pact, more than 200 cities in the world have designed their urban food policies. Few city-regions have followed this trend because of the complexity of the territorial layers and the geographical spaces surrounding the main urban centres.

The challenge the Metropolitan City of Bari (41 municipalities) to manage this complexity is willing to piloting a renewed policy that can recognizing the diversity of sociogeographical contexts and reward the social, environmental and economic contribution of the rural areas to ensure access to food to all its inhabitants, provide decent jobs, human (and ecological) wellbeing, halt tremendous urbanization trend which often redesign spaces driven by "aesthetic consumption and production" areas rather for pursuing social equalities and urban regeneration, rethink food losses reduction and reuse not only for recycling and upcycling purposes but also for the benefit of people in need and to prevent non-communicable diseases linked to bad dietary habits (i.e. overnutrition).

The process followed by the Metropolitan City of Bari, in the framework of FoodShift 2030 project, is centered on a bottom-up governance mechanism that allowed local stakeholders', namely those already engaged in activities and innovations towards the food system transformation, to advocate their vision and proposals collected in The Manifesto for the food system transition in the Metropolitan city of Bari, the Metropolitan City of Bari approved last April 2022.

In addition, to leverage the Manifesto proposals and requests, the Metropolitan City of Bari recognized the relevance of the social platform for the food system transition, set up by Ciheam Bari, partner of FoodShift2030 project, as a tool to continuously collect feed-back from citizens and connect the 41 municipalities actors and stakeholders in a common process and vision towards the local food system transformation. The local authority is now in the process of seeking alignments with its overall Strategic Plan for 2030 oriented to achieve the 2030 Agenda and with other policies and programmes that impact the food system across multiple sectors and administrative levels and finally will allocate financial resources and strategic capacity to implement it with the support of a foreseen Food Policy Assembly.



Egidio Dansero

Egidio Dansero is Full Professor of Political and Economic Geography at the University of Turin and Vice Rector for Sustainability and Development Cooperation. Since the first studies of urban and industrial geography, research interests have unfolded in the field of political and economic geography, spatial, environmental and development policies and in the last ten years focus on alternative food networks, local and urban food policies and strategies. He is coordinator of the Italian Network on Local Policies of Food, of the working group Food of the RUS and of the Atlas of Turin Food System.



Vicente Domingo

Vicente C. Domingo González is the creator and director of the NGO Humania that launched a technological platform with more than 65,000 news and documents from civil society from more than 25 countries. Thousands of news directly published by entities of Civil Society on Human Rights, Environment, Disability, Gender, Sustainable Development, Fair Trade etc. In 2016, the Valencia City Council appointed him Commissioner for the World Food Capital and organized the Summit of Cities signatories of the Milan Pact in Valencia. Since its creation in April 2019, it directs the World Sustainable Urban Food Centre of València, CEMAS.



CULTURAL UNITY AND DIVERSITY OF THE MEDITERRANEAN DIET: IDENTITARY CUISINE AND SUSTAINABLE TOURISM

Moderators: **Zain Fashho**, Royal Institute for Inter-Faith Studies (RIIFS, Jordanian ALF HoN)

Enrico Molinaro, Italian Network for the Euro-Mediterranean Dialogue (RIDE, Italian ALF HoN); Mediterranean Perspectives

Rapporteur: **Sandy Qaqish**, Royal Institute for Inter-Faith Studies, Jordan

Objective: to provide practical and concrete ways to enhance cultural values and exchanges between Mediterranean collective identities regarding the following four issues:

1. The Mediterranean diet and cuisine helps to discover different Mediterranean cultures, collective identities, and the cultural roots of various countries in the region. Food is an important element to identify and to give a feeling of belonging, representing a meeting point between people from similar identity backgrounds.

2. The role of women in this context is crucial, because they embody the collective memory of their respective communities. The rediscovery of the Mediterranean many identities' historical culinary memory leads to the development of intercultural dialogue, cultural harmonisation, and may facilitate peace-making processes.

3. Identity cuisine is a link to traditional recipes, as well as to suitable and balanced methods to treat raw materials, to respect the environment, to promote a sustainable agriculture, and to educate towards a more balanced as well as a saluber nutrition. With this goal in mind, this panel will represent the opportunity for a precious in-person coordination of the selected representatives of the Anna Lindh Foundation (civil society national networks, Advisory Council, and Secretariat) who have been cooperating between them for four years since the Identity Cuisine initiative's launch, held at the Italian Foreign Ministry on October 15, 2019.

4. Sustainable identity tourism: this dynamic of social-cohesion could drive its growth. A case-study initiative aimed at bringing people to a Mediterranean island in full respect of local environment, culture, and community, is the Turtledoves Villa in the island of Ponza (south of Rome, Italy), a potential cradle of Mediterranean cultural dialogues and exchanges: the shared goal is to use this location to set up the planned Euro-Med Center for Innovation, Higher Education, and Science Diplomacy on Sustainability (circular economy, climate change, and food security) hosting an innovative Identity Restaurant to let the different collective identities express themselves, and discover each other.

MODERATORS:



Zain Fashho

Zain Fashho BA in Business Administration from the University of Jordan. Ms. Fashho has joined the Royal Institute for Inter-Faith Studies (RIIFS) as the National Coordinator for the Jordanian Network for the Anna Lindh Foundation on 2017. She has also managed the -Erasmus+ Virtual Exchange program and the Young Mediterranean Voices (YMV).



Enrico Molinaro

Scientific biography outlining research orientation and plans for the coming years Current Activities: Secretary General of the Italian Network for the Euro Mediterranean Dialogue (RIDE-APS), Head of Network in Italy of the Anna Lindh Foundation ; Chairman: Founder, organizer, and fundraiser of the non-profit multidisciplinary research center Mediterranean Perspectives; Writer on the topics of: Status Quo in Jerusalem and its Holy Places; "sovereignty" and jurisdiction in international law; Glocalist and Statist models of collective identity; European Defense

RAPPORTEUR:



Sandy Qaqish

She has a bachelor's degree in English and Spanish Languages and Literature from the University of Jordan, and a Master degree in International Business Administration from the University of Alcalá, Madrid, Spain. Currently, she is working as Communications and Public Relations Officer at the Royal Institute for Inter-Faith Studies.

PARTICIPANTS:



George Baourakis

Director, CIHEAM Chania



Wadii Abdelwahdi

Wadii Abdelwahdi is professor and certified expert with the consulting firm Mapia, holder of a degree in public law and two honorary doctorates in human rights and Arabic literature. Head of the Anna Lindh Foundation Moroccan network and president of the association Agir Ensemble with more than 24 years of experience in Moroccan and Euro-Mediterranean civil society organizations as a project manager, trainer and expert in non-formal education and intercultural dialogue.



Merna Shalash

National coordinator of Egyptian Network of Anna Lindh Foundation / Executive Manager of Partners For Transparency foundation and holding Master degree in political science



Tzofnat Peleg-Baker

Dr.



Fadwah Khawaja al-Shaer



Necdet Saglam

Necdet Saglam is a professor of Business Administration at Anadolu University in Turkey, Director of Association of Civil Society and Development Institute and coordinator of the Turkish network of the Anna Lindh Foundation. He is also the director of 2N Innovation R&D Research Company and a former trainee of the European Union. Saglam has authored many publications, books, articles and teaching material on NGOs, SMEs, IFRS. He works for the governmental, private and the NGO-sector, delivering trainings.



Caroline Robertson-Von Trotha

Prof. Caroline Y. Robertson-von Trotha is Founding Director of ZAK / Centre for Cultural and General Studies and Distinguished Senior Fellow at the Karlsruhe Institute of Technology (KIT) Germany. She is Professor of Sociology and Cultural Studies. Her research interests include cultural change and globalisation, foreign cultural and educational policy and the theory and practice of public science. She is a member of the Advisory Council of the Anna Lindh Foundation.



FINANCE AND INVESTMENTS SDG DRIVEN AS FUNDAMENTAL PUSH FACTORS FOR A SFS-MED CHANGE OF ROUTE

Moderator: **Roberto Ridolfi**, President, LINK2007: Cooperazione in Rete
 Rapporteur: **Francesco Rampa**, ECDPM

Objective: to contribute to the change of route providing some solutions to relevant questions in the area of financing SFS MED systems.

The aspects of providing one framework and one metric for sustainability due diligence in financing is essential for the financial ecosystem of sustainability.

In order to develop functioning structures and systems for SDG compliance the financial players can profit of guarantee schemes subsidies and other blending facilities that were or are being developed, External Investment Plan, from farm to fork, next generation EU and the various plans to relaunch economic prosperity by governments (such the PNRR in Italy) and institutions like the European Commission that run an agreed policy of principles and approaches on financing sustainability.

But who is seriously working on this today? several think tanks, NGOs and research institutes, some governments and DFIs and a few enlightened entrepreneurs, very few bankers. This isn't enough. The goals of Agenda 2030 and moreover the SFS in the Mediterranean area require the commitment of a much wider turnout of participants, starting with those who are able to mobilise the necessary financial resources.

The "promised land" of big money to achieve the SDGs has not yet materialized. On the other hand the Pandemia of COVID-19 and the wars have generated Pan-crisis which will suffocate any attempt of resurrecting investments for the achievement of SDGs.

The annual financing gap to achieve the SDGs by 2030 has been estimated at USD 2.5 trillion. Until now, development finance institutions (DFIs) are key for this objective. How to fill this gap?

In the MED arena with the challenging climate change scenario, the food systems are probably one of the most complex geopolitical-sector scenarios on our planet. The discussion will aim to show how the essential catalyst role of blended finance can play out in the sustainable development finance architecture EURO-MED

Grants, equity, loans, debt and risk mitigation products (guarantees and insurance products, including hedging): all of these can include a "blended" (concessionary) component. The concessionary element can be used to address different goals imposed by the use of public funds: most remarkably it can be used to impose SDG compliance of the investments.

The SDGs that were launched as a blueprint for a more just, sustainable and prosperous future, through the UN, are gaining recognitions within the private sector. Impact investors and private companies in Food Systems aiming for a corporate disclosure on the SDGs are looking for tools and ways to analyse and present their performance on the SDGs. And while blended finance has potential to support financing for development, it is important to embed sustainability in commercial investors actions. Pension funds and big investors like Black Rock slowly but certainly are moving towards sustainability. How to

ensure that institutional investors preferring standardised financial instruments, embed SDG compliance in their strategies?

The approach of multi-stakeholders platform could be an opportunity to gather best practices and innovative approaches which have the potential to ensure investors about sustainability in various communities of practice.

The idea of a SDG-SFS MED platform implies better standardisation of processes at the level of SDG indicators and data, as well as at the level of blended-finance frameworks. Data-driven analysis for understanding the full impact of a business across its value chain can be useful in understanding where to minimize risks and maximize both SDG and financial returns. Leveraging the SDGs through multi-stakeholders platforms is a framework not only for sustainable development, but also for innovation towards generating new, more future-ready revenue streams, can help identify business opportunities that simultaneously serve the needs of the SDGs.

Finance for the SFS MED is to be scaled up, leverage ratios will need to increase, which means that DFIs will need to better mobilise private finance, managing and mitigating the higher level of risk this implies. De-risking mechanisms will include improvement of the official blended finance framework and of data availability while increasing transparency and accountability building public trust. Concretely sustainable finance can be aimed at by a dialogue among stakeholders reaching some recommendations starting from:

- A. It is essential to develop metrics and tools to guide Food systems companies and even more so for the finance sector investors, increasing transparency and disclosure, reporting more and link up strongly to the SDGs.
- B. It is fundamental that the work and the actions on SDGs by institutions be translated into business practices to create a mechanism to put a price on externalities linked to nature, sustainability, social cohesion.
- C. It is imperative that policy makers exert all their leeway to create incentives along value chains in various sectors for players along the chain to meet SDG-aligned targets.
- D. The push factor from investors is fundamental. Transparent reporting and communication between players in the markets and investors are essential.

MODERATOR:



Roberto Ridolfi

Former Assistant-Director-General for Programme Support and Technical Cooperation at the United Nations Food and Agriculture Organization (FAO). Director of the European Commission for Sustainable Growth and Development, authoring several policy actions, chaired several investment committees and main promoter of the External Investment Plan of the EU in Africa with innovative guarantees linked to the SDGs. Twice Ambassador/ Head of delegation of the European Union. Experiences in the field of blended finance, Energy, Environment and Climate Change, Food security, Human development, migration and asylum.

RAPPOREUR:



Francesco Rampa

Francesco Rampa heads the Sustainable Food Systems team at the European Centre for Development Policy Management (EC-DPM). In 2010-11 he was a consultant for FAO to support strategic investment frameworks for agricultural water. He was seconded in 2020-2021 to the Prime Minister's Office of Italy, to support the G20 Presidency. Now is also the Strategic Advisor to the 'Italian Special Envoy for Food Security'.

PARTICIPANTS:



Paolo Di Stefano

Paolo Di Stefano is a lawyer. Currently he is the Head of the EU and International Affairs at the Brussels' office of Coldiretti. Member of the Policy Coordination committee in Copa-Cogeca, of the steering committee of Farm Europe and Facilitator of the working group on value chain at the World Farmers organization.



Leonard Mizzi

Leonard MIZZI is Head of Unit at the European Commission, Directorate-General (DG) for International Cooperation and Development - Rural development, food security and nutrition. He worked in the Economic Planning Division of the Office of the Prime Minister (Malta) and from 1996-2006 was the first Director of the Malta Business Bureau in Brussels. He was also visiting lecturer at the Boston University (Brussels campus), Open University and Malta University. He often lectures at the College of Europe in Bruges.



Hans Loth

Hans Loth is Global Head UN Environment Partnership at Rabobank. He is responsible for building and managing the bank's new strategic partnership. He was Director Strategy & Business Change for Rabobank Indonesia, where he was responsible for developing and implementing a new strategy for the bank in this key Asian market. Prior to that Hans worked with Rabobank Foundation, as well as Rabobank's corporate banking team, through which he developed a deep understanding of the challenges and opportunities of global food value chains – "from Farm to Fork".



Thouraya Triki

Thouraya Triki is the Director of the Sustainable Production, Markets and Institutions Division (PMI), IFAD's technical division supporting regional teams to design and implement Investment projects and Grants aimed at reducing rural poverty and promoting food security. She also oversees IFAD's recently created private sector unit in charge of non-sovereign private sector operations and initiatives.



Stephen Mari

Stephen is a Senior Partnership Manager for CDPs International Cooperation and Development Finance Area. He is responsible for developing and managing the strategic partnerships with key European and International public development banks networks. Before joining CDP, Stephen worked as a senior consultant for Dalberg Advisors.



Dhalia Abdel Kader

Dr. Dalia A.Kader is currently Chief Sustainability Officer of Commercial International Bank (CIB), Egypt's largest private sector bank, and the Chair of the Sustainable Finance Committee at the Federation of Egyptian Banks. In addition, she is the Founder, Vice Chairman, Board Member of the "We Owe it to Egypt" Foundation, and Board Member of the CIB Foundation. She is also a member of the UNEP FI Banking Board "Principles for Responsible Banking" representing the MENA region and the Net Zero Banking Alliance (NZBA) Steering Committee representing Africa.



Nouran El Said

Nouran El Said is a passionate and experienced professional in the AgriTech industry for the past 7 years, building startups, and raising funds. She is the Co-Founder and Business Development Director of Plug'n'Grow, an agri-tech startup that provides precision agriculture solutions based on hydroponics and aquaponics."



THE MEDITERRANEAN DIET AS A STRATEGIC RESOURCE OF SUSTAINABLE DEVELOPMENT IN THE REGION

Moderators: **Roberto Capone**, Principal Administrator, CIHEAM Bari
Sandro Dernini, Coordinator, SFS-MED Platform Coordination Desk, CIHEAM Bari
Rapporteur: **Francesco Bottalico**, CIHEAM Bari

Objective:

MODERATORS:



Roberto Capone

Vito Roberto Capone, Principal Administrator of CIHEAM Bari, he is, since 2019, the Focal Point of CIHEAM on Sustainable Food Systems. He was in charge as General Secretary of the National Committee between the Italian Government and the Organizations of the United Nations (FAO, IFAD, WFP). He served as a Minister Adviser at MiPAAF dealing with international affairs in the Mediterranean area. He was a Principal Administrator at the Secretariat General of CIHEAM in Paris. His main fields of interest are: Mediterranean food systems sustainability, sustainable food production and consumption, the Mediterranean Diet.



Sandro Dernini

Sandro Dernini, PhD., is currently: Coordinator, SFS-MED Platform Coordination Desk; Senior Advisor CIHEAM- Bari; Secretary-General, IFMeD- International Foundation of the Mediterranean Diet; Chair, Forum on Mediterranean Food Cultures. He received in 2021 the Ancel and Margaret Keys Award at the 2nd International Agrobiodiversity Congress, and, in 2014, the IA-CON-SENC Award of Excellence in Food Sustainability at the Third World Conference of Public Health Nutrition.

RAPPORTEUR:



Francesco Bottalico

Dr. Francesco Bottalico graduated in economy, he holds a MSc in Territorial Development and a PhD in Environment, Resources & Sustainable Development. He is engaged in training and cooperation activities relating to Mediterranean diet, sustainable food consumption and production, traditional products."

PARTICIPANTS:



Pier Luigi Petrillo

Pier Luigi Petrillo is Full Professor of Comparative Heritage Law at the University of Rome Unitelma Sapienza and Professor of Lobbying Law at the University Luiss Guido Carli. He is Director of UNESCO Chair on Intangible Cultural Heritage and Comparative Law. He is the President of the Evaluation Body of ICH UNESCO. He was the author of the nomination file "The Mediterranean Diet" to the UNESCO. He was Head of Cabinet, Head of Legislative Office, Legal advisor of the Ministers of Environment, Culture, University and Research, Agricultural Policies, European Affairs. He is author of more than 300 scientific book and paper. His latest book is "The Legal Protection of Intangible Cultural Heritage. A Comparative Perspective" edited by Springer (2021).



Lluís Serra Majem



Wednesday, 28 September

COLLECTIVE CATERING AS A CULTURAL TOOL TO PROMOTE THE MEDITERRANEAN DIET

TASTE, QUALITY, CUISINE, TERRITORIES, INNOVATION, TRACEABILITY, FOOD WASTE, FOOD VALUE

Conducted by: **Roberto Carcangiu**, Chief, President, Associazione Cuochi Professionisti Italiani; **Sandro Dernini**, President, Forum on Mediterranean Food Cultures/Plexus International Onlus; **Lorenzo M. Donini**, Director, School of Specialization in Food Science, Sapienza University of Rome
Dedicated to **Carlo Cannella**

Objective: To promote the multiple benefits of the sustainability of the Mediterranean diet, through the development of a joint research project on collective catering, open to all interested partners, in which collective catering, supported by a communication campaign associated with the regional cuisine of the diet Mediterranean.

The collective catering has assumed a preponderant role with the increasing tendency to eat away from home for business reasons and for pleasure. Collective catering operates along all entire agri-food chains and affects significantly them. The Agri-food chains system has a significant impact on all dimensions of food sustainability (environmental, socio-cultural, economic and nutritional-healthy). The opinion of users regarding collective catering (especially institutional) is substantially negative. Upon entering the hospital, one expects to eat poorly and some dishes (puree, soups, ...) are negatively associated with being sick.

Collective catering (corporate, school, hospital, inter-company, etc.) can be enhanced as an instrument of "education" since it is increasingly latent in the family for socio-cultural reasons.

Collective catering, starting from the artisanal catering, starting from artisanal catering that bases its success and knowledge on manual skills and transformation, can play a decisive role as an educational tool by encouraging users to have a more "biologically" correct eating behavior, such as the Mediterranean diet, even and above all, inside and outside the collective catering system itself. The Mediterranean diet has less impact on the environment and reduces the incidence of chronic degenerative diseases (nutritional-healthy sustainability) and enhances local gastronomic cultures and local products (socio-cultural and cultural sustainability).

Collective catering can make a significant contribution to improving the sustainability of the Mediterranean diet as well as of the Italian agri-food chains system.

If before the "canteen" was a place of necessity between a decent meal and another in the family, now it must increasingly become a place for training in the taste and value of food, as a sustainable healthy lifestyle. which at the same time improves the quality of life (well-being) of the individual, the community and the planet..

The communication campaign will have the aim to promote the collective catering from a simple service provider to a cultural tool for education and training, through a better knowledge and appreciation of the taste and the quality of local food products, their innovation and linkages with territories, their traceability and the reduction of food waste, associated with the cuisine of the Mediterranean Diet and respect for the value of food.

The side-event in the format of a webinar is made within the framework of the agreement between Plexus International Forum Onlus and CIHEAM Bari.

Wednesday, 28 September

COMMUNITY FOOD SYSTEMS

Moderator: **Roberto Ridolfi**, Link2007

The Challenge

Sustainable Development Goal 2 "End hunger, achieve food security and improved nutrition, and promote sustainable agriculture" of the 2030 Agenda poses complex challenges. The fragility of the globalised system of production and consumption along international food chains was demonstrated by the system shocks represented by COVID-19 and the Russian-Ukrainian War. The major impact of COVID-19 was on food access not on food availability, as was initially feared. Therefore, not a global famine but a further worsening especially in territories and for population groups already affected by food insecurity, mainly due to the worsening economic situation caused by Covid19 and the persistent conditions of economic and social inequality.

Industrial agriculture and the expansion of global supply chains, import dependency and dumping phenomena are at the root of increased fragility of food systems, disconnection of food systems, and political instability in the current context of climate and health crises, insecurity, increased inequality and loss of biodiversity.

Urbanisation dynamics and modest employment and business opportunities are driving the rural-to-urban exodus and the regional and international migration, exacerbated by insecurity issues in various regions of Africa and MENA.

The Solution

As outlined by FAO (FAO Council December 2019) and the HLPE (Report No.14, July 2019) agroecology and food sovereignty offer concrete proposals to be put into practice for systemic change in food systems, in production modalities, lifestyle, science and movement for change, encompassing social, economic, political, ecological and cultural dimensions and involving a network of actors from Institutions and Civil Society that ensures democratic governance of Food Systems

It is about implementing a strategy to support food systems understood as Public Goods whose implementation requires a new model of cooperation between institutions and development, research, civil society and business actors. A model that does not undermine global food governance systems while placing actors in a collaborative dynamic and respecting the principle of subsidiarity. A transformative vision of policies and investments is therefore necessary for the promotion of agrobiodiversity and the enhancement of the cultural dimension of food, the improvement of access systems to primary resources and the recognition of local knowledge systems, the support of local products to territorial markets and functional connections in local food systems.

During the Third World Conference on Sustainable Food Systems, Link2007 aims to present significant experiences on Community Food developed from the last mile with our partners in Africa and the Middle East where good practices with measurable and replicable impact have been developed to support local production systems from a food sovereignty perspective and continue the effort to provide inclusive and sustainable responses to the food crisis. Among the key elements of the experiences and good practices are sustainable rice-growing systems, the valorisation of local genetic resources, experiences of social economy, productive and nutritional diversification and community food systems. Some elements on the co-design processes of the interventions and the valorisation of good practices on a platform hosted by SFS-MED will also be presented.



Thursday , 29 September

CLUSTER AGRIFOOD AND MEDITERRANEAN DIET: RESEARCH AND BUSINESSES FACING SUSTAINABILITY.

Conducted by: **Daniele Rossi**, Chair, Copa Cogeca Research & Innovation WP, Delegate Confagricoltura

Objectives:

- **Presenting the cluster's position and priorities on issues related to nutrition and health with particular reference to the mediterranean diet and the sustainability of the italian agri-food model**
- **Listening to what research is doing to enhance and innovate made in products respecting environment protecting traditional values**
- **Listening to the companies to understand how they are facing the challenges of the pandemic and the consequences of the conflict: how are they responding to the needs of the consumer? What innovations are they implementing?**

The food sector is strongly interested in the global affirmation of sustainable production and consumption models to meet the challenges that lie ahead in the coming years, namely to produce 70% more food to feed the 9 billion inhabitants of the planet estimated in 2050 by FAO, with safe, quality and sufficient food.

The increase in life expectancy linked to the excellence of the Mediterranean diet, together with the sustainability of the Italian agri-food model, have made it a world reference model.

However, the drastic change in our lifestyle in recent decades, and further exacerbated by the pandemic and the economic repercussions of the conflict in Ukraine, will increasingly impact on eating habits.

These complications have contributed to increasing consumer awareness of the close relationship between nutrition and health and its attention to Made in, environmental protection and product sustainability.

Therefore, to meet these changing needs, it is necessary for companies to innovate and enhance their food products, respecting the environment and without sacrificing quality, with the aim of improving their health and nutritional profile.



ON THE OCCASION OF
THE 60TH ANNIVERSARY OF



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