



**SUSTAINABLE
NUTRITION**
SCIENTIFIC BOARD

NUTRITION, HEALTH, SUSTAINABILITY TOWARDS 2050: THE NEED FOR AN INTEGRATED APPROACH

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THE SUSTAINABLE NUTRITION SCIENTIFIC BOARD: A NEW GROUP OF INTERNATIONAL EXPERTS TO RESEARCH & LEVERAGE BIG DATA TO PROVIDE CONCRETE SOLUTIONS FOR GLOBAL FOOD CHALLENGES THROUGH A HOLISTIC APPROACH TO SUSTAINABILITY & NUTRITION

The board launched with a “Virtual Symposium” outlining a three-year journey, aimed at investigating the importance of Sustainable Nutrition feeding the 2050 needs of the global population whilst respecting the planet.

June 12th, 2020

Today marks the launch of the Sustainable Nutrition Scientific Board (SNSB), an independent group of academic research **to investigate the importance of Sustainable Nutrition, and the solutions for the 2050 needs of Humanity, and will share actionable, sustainable nutrition insights & solutions to feed the planet whilst respecting the environment.** The Board is made up of renowned international scientists from different – yet complementary – disciplines. By embarking on a three-year journey, the SNSB will develop fact-based recommendations drawn from big data on what is needed to support the growth of humankind in a sustainable way, all through a holistic approach to three key themes: nutrition, health and the environment.

The announcement was made with a kick-off global virtual symposium titled **“Nutrition, Health, Sustainability Towards 2050: the need for an integrated approach”** which saw the participation of the SNSB and other leading experts who debated the concept of Sustainable Nutrition.

By 2050, humanity is expected to be made up of 10 billion people. And, as it stands, the way populations are producing and consuming food is pushing the planet and its systems to the limit. To ensure enough safe, nutritious food for all, as well as sustainably-developed products, there is a need for a new approach that optimizes health and nutritional outcomes whilst respecting the key ecosystems on which the world depends. These are complex issues that cannot be solved in isolation. This is where the concept of “*Sustainable Nutrition*” comes in.

Arne Astrup, SNSB President stated, *“The Sustainable Nutrition Scientific Board is thrilled with the opportunity to collaborate across disciplines to uncover why ‘Sustainable Nutrition’ is the only way forward for the future.”* He added, *“Our mission is to develop data-based research that will drive change in the food industry as well as consumption behaviors through three, one-year research projects, beginning with an analysis of fats and vegetable oils. We hope our pre-competitive, actionable recommendations will provide assistance to humanity with the help of stakeholders beyond the scientific community in a critical phase as we close in on deadlines for the United Nation’s 2030 agenda and the Paris Climate Accord.”*

The Sustainable Nutrition Scientific Board's Structure

The SNSB is made up of a group of international experts who will collaborate and draw on expertise from various disciplines including nutrition, health, environment as well as epidemiology:

- **Professor Arne Astrup** (SNSB, Board President): leading nutrition and obesity researcher. Head of the University of Copenhagen's Nutrition, Exercise and Sports department.
- **Professor Mario Rasetti** (SNSB, Board Co-chair): "Big Data" expert with a focus on statistical mechanics, information and quantum computing. President and co-founder of the Institute for Scientific Interchange Foundation (ISI); Professor Emeritus of Theoretical Physics at the Politecnico di Torino.
- **Professor Olivier Jolliet** (SNSB, Board Member): Expert in food life cycle impact assessments, and healthy, sustainable food systems. Professor of Environmental Health Sciences at the University of Michigan. Co-founded the UNEP/SETAC Life Cycle Initiative.
- **Professor Stefania Boccia** (SNSB, Board Member): Public health and epidemiology expert. Professor of Hygiene and Preventative Medicine at the Università Cattolica del Sacro Cuore (Rome); Editor in Chief of *Epidemiology, Biostatistics and Public Health*.
- **Professor Pier Mannuccio Mannucci** (SNSB, Board Member): Expert on the effects of environmental pollution on health and disease. Emeritus Professor of Internal Medicine at the University of Milan; Editor in Chief of the *European Journal of Internal Medicine*.
- **Professor Erik Meijaard** (SNSB, Board Member): Tropical wildlife conservation scientist and practitioner, IUCN Oil Palm Task Force Chairman, Director of Borneo Futures, Adjunct Professor University of Queensland, Hon. Professor Durrell Institute of Conservation and Ecology.
- **Professor Raanan Shamir** (SNSB, Board Member): Pediatric health expert. Professor of Pediatrics and Chair for Pediatric Research at the Tel Aviv University; Chairman of the Schneider Children's Medical Center of Israel's Institute of Gastroenterology, Nutrition and Liver Diseases.

The SNSB Research Approach

The Board will tackle multidimensional challenges by using interdisciplinary approaches while experimenting with innovative methods for fact-mining, such as Big Data and Artificial Intelligence (AI). The base data that will be cross-referenced and analyzed will be provided with the support of the Institute for Scientific Interchange Foundation and will cover the areas of climate and natural resources, food production processes, socio-economic factors as well as human health.

These tools will enable the team to come up with evidence-based and fact-checked sustainable nutrition insights that could be available for the scientific community and other relevant stakeholders across the globe.

The Research Topics

Every year for three years, the SNSB will undertake research under a specific theme that will support the intricate elements surrounding Sustainable Nutrition. The first-year project will be focused on the role oils and fats have on humans, exploring not only daily intake nutrition but also environmental and socioeconomic effects of production processes. These research findings recommendations are expected to be announced at the IUCN World Conservation Congress in January 2021.

###

About the Sustainable Nutrition Scientific Board

Established in 2020, the Sustainable Nutrition Scientific Board is a group of independent, cross-disciplinary research experts coming together to leverage big data to uncover concrete, measurable pre-competitive solutions for the food industry to tackle the world's challenges related to Sustainable Nutrition, in particular nutrition, health, and the environment. The SNSB has been created with the unquestioning support of Nutella.

THE CONCEPT OF SUSTAINABLE NUTRITION

WHAT IS SUSTAINABLE NUTRITION?

The way we produce and consume food is pushing the planet and its systems to the limit



THE SUSTAINABLE NUTRITION SCIENTIFIC BOARD

THE SUSTAINABLE NUTRITION SCIENTIFIC BOARD

Launched in 2020

A group of leading expert international researchers coming together to address complex issue in the areas of sustainability, nutrition and health



Arne Astrup
(President, Nutrition & Obesity Expert)



Mario Rasetti
(Co-chair, Big Data Expert)



Olivier Jolliet
(Environmental Health Sciences Expert)



Stefania Boccia
(Public Health & Epidemiology Expert)



Pier Mannuccio Mannucci
(Environment & Health Expert)



Erik Meijaard
(Vegetable Oils Scientific Expert)



Raanan Shamir
(Pediatric Health Expert)

Their challenge

Imagine a future where our world's nutrition is fully tied to sustainability and identify new, concrete solutions along every step of key food supply chains



Their research

Each year, the research topic will evolve to deep dive complementary aspects of "Sustainable Nutrition" (nutrition, health and sustainability) with an holistic approach



Their output

Academic research, evidence-based and fact-checked sustainable nutrition insights that could be available for academics, as well as other relevant stakeholders across the globe



YEAR 1 RESEARCH PROJECT FACT SHEET: “FATS & VEGETABLE OILS”

Overview



The Sustainable Nutrition Scientific Board (SNSB) will embark on three, 1-year research projects to uncover insights and actionable recommendations to drive positive change in food industry supply chains, as well as shift consumer behaviors towards sustainable diets. The ultimate objective is to provide solutions for one of our world’s critical challenges: feeding 10 billion people sustainably from environmental, health and nutritional points of view.

Each year, the research topic will evolve to deep dive a key attribute of “Sustainable Nutrition.” During 2020, the first year of research, the SNSB is investigating the “case of fats and vegetable oils”. The initial project has five primary goals:

- **Define the overarching approach to Sustainable Nutrition**, which will guide all of the Board’s activities.
- **Articulate concepts related to the effects of food on health** (negative, neutral, positive).
- Based on the “universal diet” model, **analyze the role fats and vegetable oils (inclusive of sustainable palm oil) play** in daily nutritional intake.
- **Better understand the potential fats and vegetable oils may have** as a solution for feeding humanity through a sustainable approach by 2050, with a particular emphasis on sustainable palm oil.
- **Explore key socioeconomic and environmental issues** within the fats and vegetable oils supply chain, along with actionable recommendations.



About Fats & Vegetable Oils

By 2050, it is estimated that there will be 10 billion people living on the planet, all of whom will need a well-balanced, sustainably-based diet that includes added fats like vegetable oils. According to the European Food Safety Authority, these account for at least 20% of daily calorie intake. And as such, **without sustainably sourcing fats and vegetable oils it will be impossible to feed the whole world.**

Based on this hypothesis, the SNSB is exploring the **crucial need for these macro-nutrients**, and how the sustainable development of these commodities – inclusive of palm oil – have the potential to support the United Nation's 2030 Agenda SDGs, particularly Sustainable Development Goal 2 (Zero Hunger), 3 (Good Health and Well-being), 8 (Economic Growth) and 15 (Life on Land).

Indeed, should there be a global commitment to develop and promote only sustainable added fat products, the food industry could provide a strong solution to help feed the world's growing population. All with nutrition-rich, healthy products that are affordable and produced by a supply chain that yields low environmental impacts through the respect of biodiversity and of smallholder farmer community livelihoods.

One particular example is sustainable palm oil. A topic of much debate in recent years, the oil is currently the **fourth source of calories for humanity** (after rice, wheat, and maize). Considering that an average adult needs to consume 164,250 kcal/year of fats (for a person consuming an average of 2,500 kcal/day), this universal fat source used in cultures as far back as the ancient Egypt represents an opportunity. Not only because of its nutritional potential, but also because of the positive sustainability impact that could be had should the supply chain adopt stricter standards and is properly managed from beginning to end with the aid of innovative technologies in turn bettering deforestation prevention, cultivation practices and socioeconomic smallholder farmer welfare.

Timing

During **summer 2020**, the SNSB will be implementing the first phase of research, analyzing and bringing together insights through a position paper that will be submitted before the end of August / early September.

Subsequently, key findings and recommendations could be segmented, shared and discussed with relevant stakeholders across the globe.

Key preliminary results and recommendations of the year-1 research activity are expected to be presented at IUCN World Conservation Congress in **January 2021**.

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BIOGRAPHIES, RESEARCH ABSTRACTS & COMMENTS



Professor Arne Astrup
(SNSB, Board President)

Professor, Head of Department of Nutrition, Exercise and Sports, University of Copenhagen



Professor Mario Rasetti
(SNSB, Board Co-chair)

President and co-founder of the Institute for Scientific Interchange Foundation (ISI); Professor Emeritus of Theoretical Physics at the Politecnico di Torino.



Professor Olivier Jolliet
(SNSB, Board Member)

Professor, Environmental Health Sciences, School of Public Health, University of Michigan



Professor Stefania Boccia
(SNSB, Board Member)

Professor of Hygiene, Preventive Medicine & Public Health, Università Cattolica del Sacro Cuore



Professor Pier Mannuccio Mannucci
(SNSB, Board Member)

Professor Emeritus, Internal Medicine, University of Milan

BIOGRAPHIES, RESEARCH ABSTRACTS & COMMENTS



Professor Erik Meijaard (SNSB, Board Member)

Tropical wildlife conservation scientist and practitioner, IUCN Oil Palm Task Force Chairman, Director of Borneo Futures, Adjunct Professor University of Queensland, Hon. Professor Durrell Institute of Conservation and Ecology



Professor Raanan Shamir (SNSB, Board Member)

Professor of Pediatrics, the Lea and Arie Pickel Chair for Pediatric Research, Tel Aviv University



Carl Bek-Nielsen (Contributing Expert)

Chief Executive Director, United Plantations Berhad



Alexi Ernstoff (Contributing Expert)

Quantis Global Science Lead



Aishah Pathak (Master of Ceremony)

International communication and dialogue expert

SNSB Board members

SPEAKER



Professor Arne Astrup (SNSB President)

Professor, Head of Department of Nutrition, Exercise and Sports, University of Copenhagen

Previously, Dr. Astrup was Chairman of the State Council for Nutrition, and for international research organisations. Major scientific areas of focus include appetite regulation, treatment of obesity, type 2 diabetes, and cardiovascular disease, as well as diseases where nutrition and physical activity play a role. He is also interested in bridging nutrition, gastronomy and health, and has written a large number of popular diet books, published worldwide. An avid researcher, he publishes frequently in journals such as *British Medical Journal*, *Lancet*, *Nature* and *New England Journal of Medicine*, being named as one of the most cited researchers in the world by in Clarivate's (Web of Science) list in 2018. Astrup was created Knight of the Order of Dannebrog in 1999 By The Queen Margrethe II, and Knight of the First Order of Dannebrog in November 2012.

Research abstract discussed during Virtual Symposium: *Feeding the growing global population needs incorporation of more fats of plant origin to ensure sufficient amount of calories to meet energy requirements. Consequently, there is a need for re-assessment of the health and sustainability aspects of various oils and fats, including vegetable oils with high content of dietary saturated fats (SFA). The recommendation to limit SFA intake has persisted despite mounting evidence to the contrary. Most recent meta-analyses of randomized trials and observational studies found no beneficial effects of reducing SFA intake on cardiovascular disease (CVD) and total mortality, and instead found protective effects against stroke. Although SFAs increase low-density lipoprotein (LDL)-cholesterol, in most individuals, this is not due to increasing levels of small, dense LDL particles, but rather larger LDL which are much less strongly related to CVD risk. It is also apparent that the health effects of foods cannot be predicted by their content in any nutrient group, without considering the overall macronutrient distribution. Despite high contents of SFA whole-fat dairy, unprocessed meat, eggs, dark chocolate and various plant oils are SFA-rich foods and oils with a complex matrix that are not associated with increased risk of CVD. The totality of available evidence does not support further limiting the intake of such foods, and oils of plant origin can be an important part of the strategy to ensure calories for the worlds' population.*

Comment: *"There have been an endless number of debates about the role added fats and vegetable oils play in the health of the human body. Through our research, we aim to provide definitive, scientific-based results that will pinpoint the important role these nutrients have in daily sustainable diets, both today and in the future of the world's growing population."*

SNSB Board members

SPEAKER



Professor Mario Rasetti (SNSB Co-chair)

President and co-founder of the Institute for Scientific Interchange Foundation (ISI); Professor Emeritus of Theoretical Physics at the Politecnico di Torino.

Professor Mario Rasetti is Professor Emeritus of Theoretical Physics at the Politecnico di Torino, where he founded and directed the Doctorate School. Dr. Rasetti serves as President of the ISI Foundation (Istituto Interscambio Scientifico) and is an Advisor of the European Commission. His research activity is currently focused on statistical mechanics, quantum information, computation and “Big Data.” In 2011, he was awarded the Majorana Prize for field theory as well as the Volta Medal.

Research abstract discussed during Virtual Symposium: *Health promotion, disease prevention, eradication of lack of food in the third world are different facets of a single socio-economic priority, as industrialized countries face increasingly strained healthcare systems, aging population, skyrocketing individual and social costs of diseases, while the rest of the planet struggles with the dramatic growth of social inequality and hunger.*

Better nutrition is the main, effective prevention strategy for chronic non-transmissible diseases, as unhealthy diet is recognized as one of their major risk factors. The entire food chain involved in the provision and consumption of healthy diets is entangled with issues such as healthcare, economy, environment, individual lifestyles. Another aspect is sustainability. The quest for food, water and energy grows at striking pace with the change in the distribution of consumptions induced by population growth; climate changes worsen the prospects of availability of these resources while the severity of climate variations intensifies. Agriculture depends crucially on the availability of water and energy-rich fertilizers; thus, paradoxically, it threatens to exacerbate the lack of food.

Transversal across these is the most ethically excruciating issue: children. It is children who pay the price of lack of availability of good, nutrient, accessible, healthy food. Children are the most vulnerable to scarce nutrition, prone to extremes: from obesity in too wealthy countries, to starvation in underdeveloped ones.

Current forms of agriculture are intrinsically fragile in terms of sustainability. Up to a very recent past research priorities in it did not consider integration into a global sustainable agricultural system as a priority. Giving a central role to sustainability—including the interaction of socio-economic conditions with the ecology of agro-systems—in agriculture is mandatory. Is it doable?

SNSB Board members

The digital revolution has fully entered all fields of biology: the ‘-omics’ era, based on high-throughput digital technologies, is revealing the metabolic networks that shape plant, animal, and microbial traits of agricultural interest. A massive amount of data on the genetic determinants of useful organisms is available in unprecedented quantities, with a parallel exponential growth of data about the mechanism of nutrition and its impact on human health. A digital resource has been created that can be used for the design and production of the food of tomorrow. Handling such huge amounts of data, though, is a task that can be successfully completed only by systems-oriented methodologies –mostly AI and data science methods– fully enabling a cross-disciplinary integrative approach. Big data may lead to full understanding of the interactions between agro-ecosystem drivers and health, at all scales, achieving through a deeper understanding of the interaction of food and human organism a novel strategic, knowledge-based development of new healthier food from self-sustainable sources.

By predictive models and systems biology algorithms, data science may provide a true understanding of the physiological and molecular impact of nutrition on human health, by functional solutions for food-centered disease prevention. Full data-based knowledge of the living components of agricultural systems genomics permits to design, with the help of AI, innovation to a truly sustainable food system; a new “from farm to health” concept: safe, sufficient, affordable, and healthy diet constituents for all, from self-sustainable nutritious crops that reduce the need for chemical and energy inputs.

Do we have the tools to explore in depth the diet-health homeostasis and understand how food meta-genome and immune function interact, the role of the mycobiome of fermentation-derived micro-organisms in health, correlating data at the micro-level that connect nutritional meta-genomics and metabolomics, with clinical and nutritional data, at the macro-level, facing the dare of self-sustainability of health for all, now? We do. The data analytics & AI tools (ML, DL, TDA): Machine Learning, Deep Reinforcement Learning, Topological Data Analysis will allow us to reach the goal.

Comment: *“With the aid of the latest Big Data technology, researchers today have the opportunity to explore cross-disciplinary topics more easily than never-before. We have the power to spark real change in the role the food industry plays in helping the world evolve by examining curated research findings and identifying concrete solutions to the fragile agricultural sector’s supply chain.”*

SNSB Board members

SPEAKER



Professor Olivier Jolliet (SNSB Member)

*Professor, Environmental Health Sciences,
School of Public Health, University of Michigan*

Dr. Olivier Jolliet is a Professor in life cycle impact and risk modeling at the Department of Environmental Health Sciences in the School of Public Health of the University of Michigan. A founding member of Quantis, Dr. Jolliet co-initiated the Life Cycle Initiative for the United Nation Environmental Program (UNEP) and is presently chairing the development of a Global Life Cycle Impact Assessment Method. His teaching and research mission is to compare the life cycle human health risks and benefits of foods and chemicals in consumer products.

Research abstract discussed during Virtual Symposium: *A study developed an approach to assess the combined health and environmental risks and benefits associated with over 5,000 food items, expressed in minutes of healthy life lost or gained, highlighting the performances of, for example, oils and nuts-based products. The findings demonstrate how small, but targeted changes in the human diet and use of products can be highly beneficial for health and the environment, with 46 minutes of healthy life saved per person per day and 36% reduction in food carbon footprint.*

Additionally, the research demonstrates that this same approach can be extended by leveraging Big Data that helps test various hypotheses based on other lifestyle factors such as physical activity, and by combining food consumption with mortality.

Comment: *"There is a lot of misinformation about the risks and benefits of key foods human beings across the world consume on a daily basis. Through the power of research, scientists can debunk myths and provide facts that help better inform not only supply chains, but also consumers in the nutritional choices they make."*

SNSB Board members



Professor Stefania Boccia (SNSB Member)

Professor of Hygiene, Preventive Medicine & Public Health, Università Cattolica del Sacro Cuore

Since 2018, Dr. Stefania Boccia has served as Professor of Hygiene, Preventive Medicine and Public Health at the Università Cattolica del Sacro Cuore in Rome. A member of the Ethics Committee of the Policlinico Foundation "A. Gemelli" IRCC, she has also since 2018 served as President of the Public Health Epidemiology Department of the European Public Health Association (EUPHA). In 2016, Dr. Boccia was Adjunct Professor at New York City's Mount Sinai School of Medicine's Oncology Department, the same year when she founded the academic spin-off of the Università Cattolica del Sacro Cuore's "Value in Health Technology Assessment for Leadership and Innovation (VIHTALI)." Dr. Boccia is the author of over 200 scientific papers related to the topics of epidemiology and tumor prevention, epidemiological methodology, health services, genomics in public health, hospital hygiene, and environmental hygiene.

Additionally, Dr. Boccia is the Scientific Coordinator for a European Commission Horizon 2020 project titled "European Staff Exchange for INtegrating Precision Health into the HealthCare Systems" (ExACT)," which was awarded the RISE (Marie Slodowska-Curie Actions) grant (2019- 2022).

Comment: *"The role of Sustainable Nutrition solution is essential as the world's population continues to grow exponentially. Through research, it is my hope that we will be able to uncover concepts and guidelines that will incentivize not only consumers to adopt a sustainable diet, but also provide tools for leaders to make real change."*

SNSB Board members



Professor Pier Mannuccio Mannucci (SNSB Member)

*Professor Emeritus, Internal Medicine,
University of Milan*

Dr. Mannucci is Emeritus Professor of Internal Medicine at the University of Milan. Between 2010 and 2015, he served as Scientific Director of the IRCCS Cà Granda Maggiore Research Hospital, previously having directed the Angelo Bianchi Bonomi Hemophilia and Thrombosis Center at the IRCCS Ospedale Maggiore of Milan.

In addition to being awarded various international scientific prizes (e.g. International Prize of the French Hemophilia Association, Murray Thelin Award of the National Hemophilia Foundation, Jean Bernard Award of the European Hematology Association, etc.) between 1996-1997 Dr. Mannucci served as President of the International Society for Thrombosis and Haemostasis.

Previously, he was the Editor-in-Chief of the *Journal of Thrombosis and Haemostasis*, and since 2009 has served as Editor-in-Chief of the *European Journal of Internal Medicine*. He has authored over 1200 publications, dealing with topics in the field of the hemophilias (particularly the side effects of therapy), von Willebrand disease and rare coagulation disorders (molecular basis and therapy), the pathophysiology and genetics of coronary artery disease and venous thromboembolism and hereditary thrombophilia. His more recent research interests are focused in part on the effects of environmental pollution on health and disease.

Comment: *"The food industry is under constant pressure to produce enough product to meet consumer demands. Naturally, the varied supply chains within the industry have environmental impacts that oftentimes negatively affect the environment and in turn the health of the very people they serve. Although many governments and industries are making bold moves and forging ahead, more fact-based solutions are needed to combat the issues our world faces."*

SNSB Board members

SPEAKER



Professor Erik Meijaard (SNSB Member)

Tropical wildlife conservation scientist and practitioner, IUCN Oil Palm Task Force Chairman, Director of Borneo Futures, Adjunct Professor University of Queensland, Hon. Professor Durrell Institute of Conservation and Ecology

Prof. Erik Meijaard is a conservation scientist and practitioner with long-term experience working in the Asian tropics. He is Director of Borneo Futures in Brunei Darussalam, Adjunct Professor at the University of Queensland and Honorary Professor at the Durrell Institute of Conservation and Ecology in Canterbury, UK. Prof. Meijaard also chairs the IUCN Oil Palm Task Force and has long-term experience working on the science and practice of the production of vegetable oils. He is an avid writer both in popular and scientific media, focusing on wildlife conservation challenges, including frequent writings about orangutans.

Research abstract discussed during Virtual Symposium: *The world needs oils and fats. They are in our food, we cook with them, and we use them in our soap and shampoo and for many other reasons.*

These oils and fats mostly derive from either animals or plants, with animal fats requiring the most land. With growing human populations and welfare, the demand for these oils and fats is likely to increase, and so will the demand on land to produce these goods. This is where sustainability questions arise. Sustainability deals with the many social, economic and environmental impacts of agricultural production.

These impacts can be positive, like better income for farmers or improved food security, or they can be negative, such as the impacts of palm oil production on orangutans. To produce the oils the world wants, choices need to be made between different oil crops. Each crop has its own impacts. Industrial olive oil production has been accused of killing millions of birds, the use of pesticides in rapeseed oil production affects bee populations, and coconut harms endemic species in the Pacific. Importantly the yields of crops differ, and some crops need much less land than others to produce the same amount of oil. To minimize the negative impacts of vegetable oil production and maximize the positives, we need to optimize land use. But before we can do that, we need to know where crops are grown, and what their past impacts have been. Knowing the past will help make us better choices about crops and land in the future.

Comment: *"Understanding the positive impact the global agricultural industry can play in conservation efforts of some of our most fragile ecosystems is critical for the sustainable development of our planet."*

SNSB Board members



Professor Raanan Shamir (SNSB Member)

*Professor of Pediatrics, the Lea and Arie Pickel
Chair for Pediatric Research, Tel Aviv University*

Dr. Raanan Shamir is Professor of Pediatrics and the Lea and Arie Pickel Chair for Pediatric Research at the Sackler Faculty of Medicine, Tel Aviv University, and Chairman of the Institute of Gastroenterology, Nutrition and Liver Diseases at Schneider Children's Medical Center of Israel.

He currently sits on numerous committees, including: Member of the National Council on Gastroenterology, Nutrition and Liver Diseases, Member of the ESPEN (European Society for Clinical Nutrition and Metabolism) Advisory Board, Member of the Scientific Committee of the Nutrition and Growth Network, Member of the UEG (United European Gastroenterology) Research Committee, Council Member, and Chair of the Scientific Advisory Board of the celiac association of Israel and member of the Sustainable Nutrition Scientific Board. Dr. Shamir is the immediate Past President of ESPGHAN and serves as the ESPGHAN Chair of the publication committee of JPGN (*Journal of Pediatric Gastroenterology and Nutrition*) he is also the co-editor for the *Pediatric Section of Current Opinion in Clinical Nutrition and Metabolism*.

Dr. Shamir has published more than 450 original papers, reviews and comments, book chapters and guidelines. His current research areas include pediatric nutrition, nutrition and growth, celiac disease, inflammatory bowel disease and childhood hyperlipidemia.

Comment: *"The concept of a sustainable diet must be adopted from the very first day of a human being's life. It is critical for young bodies to be nourished with nutritious foods that aid in the correct physical and cognitive development. Sustainably-sourced foods with high nutritional value does just that."*

SNSB Virtual Symposium

SPEAKER



Carl Bek-Nielsen (Contributing Expert)

Chief Executive Director, United Plantations Berhad

Chief Executive Director (CED) of United Plantations Berhad with close to 24 years of experience within the Palm Oil Industry, having presented numerous papers at several international conferences. A Danish citizen residing in Malaysia, Mr. Bek-Nielsen, began his career with United Plantations in 1993 as a Cadet Planter. In 1998 he returned to Malaysia to take up the position of Corporate Affairs Officer with the company, holding a series of roles until becoming CED in 2013. He is currently Chairman of United International Enterprises Ltd, Vice Chairman of United Plantations Bhd, and Board Member of Melker Schörling AB (MSAB), Sweden.

Currently, Mr. Bek-Nielsen is a Council Member of the Malaysian Palm Oil Association (MPOA), the Malaysian Palm Oil Council (MPOC) and serves as a member of the Programme Advisory Committee to the Malaysian Palm Oil Board (MPOB). In 2014, he was appointed to the RSPO Board of Governors as Co-Chairman representing the MPOA.

Comment: *"The palm oil industry has only one road to take: a sustainable one. I am proud that key players have come together over the last decade to revolutionize our supply chain, making concrete changes so this industry by providing leadership when it comes to producing food for a growing world population in the most sustainable way."*

SNSB Virtual Symposium

SPEAKER



Alexi Ernstoff (Contributing Expert)

Quantis Global Science Lead

Alexi Ernstoff is a consultant at Quantis. She aims to bridge sustainability science with business decisions and is fiercely committed to inspire change. Her PhD work at the Technical University of Denmark focused on pioneering methods to include consumer health in quantitative sustainability assessments. Today her work continues to focus on creating new methods and integrating existing ones to better understand food systems. Her clients include the World Business Council for Sustainable Development, Olam, Cargill, Nestlé, and she works alongside the Cool Farm Alliance and World Resources Institute.

Comment: *"We have enough data and knowledge to act. What we still need is the willingness to change ourselves and a commitment to collective change."*

SNSB Virtual Symposium



Aishah Pathak (Master of Ceremony)

International communication and dialogue expert

Born from Indian parents, brought up in Italy, and with a lifelong British education, international communication and dialogue in all its facets has always been the core of both Aishah's studies and her career choices. Graduated with a BSc in Media Studies and an MA in International Communications, since 2011 she is a Senior International Recruitment Officer at Università Cattolica del Sacro Cuore developing a passion for strategy, marketing and sales. Delivering webinars and presentations is her area of expertise, and transmitting energy to her audience her favourite challenge. Her fascination for the topic of food sustainability, the topic is reflected by her understanding of the paramount importance it plays in society now and in future.



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