

NUTRITION AND SUSTAINABILITY



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A Long-term Vision for Effective Strategies

Co-organized by the Government of Malawi, Bioversity International,
FAO and the UNSCN

LIST OF ACRONYMS

ACF	Action Contre la Faim
ASAP	Adaptation for Smallholder Agriculture Programme
CFS	Committee on World Food Security
CGIAR	Consultative Group on International Agricultural Research.
COP	Conference of the Parties
CRP	CGIAR Research Program
CSO	Civil Society Organization
CVD	Cardiovascular Disease
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FIAN	Foodfirst Information & Action Network
GFAR	Global Forum on Agricultural Research
GHG	Greenhouse Gas
IAASTD	International Assessment of Agricultural Knowledge, Science and Technology for Development
IAMM	L'Institut Agronomique Méditerranéen de Montpellier
ICN2	Second International Conference on Nutrition
ICRAF	International Centre for Research in Agroforestry
IFAD	International Fund for Agricultural Development
LMIC	Low and Middle Income Country
MDG	Millennium Development Goal
MOSAICC	MOdeling System for Agricultural Impacts of Climate Change
MRFCJ	Mary Robinson Foundation – Climate Justice

NCD	Noncommunicable Disease
NGO	Nongovernmental Organization
PHI	Public Health International
PTD	Participatory Tree Domestication'
REACH	Renewed Efforts Against Child Hunger and Nutrition
SDG	Sustainable Development Goal
SUN	Scaling Up Nutrition
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNSCN	United Nations System Standing Committee on Nutrition
WFP	World Food Programme
WHO	World Health Organization
WWF	World Wildlife Fund

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Nutrition and sustainability

A LONG-TERM VISION FOR EFFECTIVE STRATEGIES

EXECUTIVE SUMMARY

In the last two decades, the world has profoundly changed. Over 800 million are hungry and 2 billion lack essential micronutrients, while 2 billion are overweight and prone to diet-related diseases. Food and agricultural systems have evolved to become more complex and global, with longer value chains. Food moving from the farm to the fork means that nutrition is now recognized as being multi-sectoral, multi-level, multi-stakeholder and multi-disciplinary. More than 20 years after the first International Conference on Nutrition (ICN) in 1992, the second 2014 ICN ([ICN2](#)) cannot take a “business as usual” approach.

The Nutrition and Sustainability Seminar was organized by the [Government of Malawi](#), [Bioversity International](#), [FAO](#) and the [UNSCN](#) to bring together people working on nutrition, food systems, climate change, health, the environment and other areas to discuss and review options in the context of sustainability *per se*, and sustainable development targets and goals. The seminar was an opportunity to inform the ICN2 Technical Preparatory Meeting held on the following three days, 13 to 15 November. The Seminar included technical sessions on Climate Change and Nutrition, Sustainable Diets as well as presentations from a wide array of government, UN and non-governmental organizations.

Climate Change and Nutrition are typically discussed in different fora and perceived by practitioners as unrelated and “flavour-of-the-month” topics. The linkage between climate change and nutrition is significant. Healthy and resilient food systems will contribute to both healthy diets and climate change mitigation; nutrition, diet and food systems both influence, and are affected by, climate change. Addressing these two cross-cutting issues of climate change and nutrition jointly is a means to bring together natural resources, sustainability, food security and health agendas. We need healthy environments and we need sustainable diets for a healthy environment. Both climate change and nutrition should therefore be mainstreamed throughout sectoral policies and strategies at all levels, including agriculture, environment, health, education and social protection.

The most vulnerable people are those most affected by, and at-risk from, climate change, and are also the most affected by, and at risk for, malnutrition. This injustice must be addressed. To be credible, the global response to both climate change and malnutrition must be based on a clear understanding of the rights and the reality of the lives of the people most affected, now and in the future. It is essential to bring together policy makers and people who are facing and addressing climate change problems on a daily basis, in order to ensure that policies and programmes are appropriate and supportive. In addition, we must recognize the challenges faced dealing with climate change globally. Learning from these experiences will be essential if we are to realistically manage both nutrition and climate change challenges.

Advocacy for linking the climate change and nutrition agendas will require a better understanding of the political economy and improved metrics. Significant work on climate change impact assessment and monitoring is being done in both the health and food security sectors. These efforts need to be broadened, strengthened and harmonized, and nutrition must be adequately incorporated.

It is reassuring that countries such as Malawi have embraced this joint agenda. It is time to engage on a joint action-learning movement to learn from their experiences and inform the global agenda, and to ensure the exchange of experiences across countries and institutions facing similar challenges. We must learn from country and local level action, but also from the price of inaction.

The UN's Zero Hunger Challenge ([ZHC](#)) aims for all food systems to be sustainable. The way we produce and consume food contributes to biodiversity loss, pressures on natural resources, Greenhouse Gas (GHG) Emissions and excessive agro-chemical inputs. Agriculture policies and programmes have concentrated so far on commodities and value chains. We need policy-makers to move beyond the prevailing commodity approach and start thinking of whole diets and food systems.

In order to be sustainable, diets must be healthy, compatible with sustainable management of natural resources and social equity. They should therefore constitute success for both producers and consumers but the concept must be operationalized; and the contribution to livelihoods and their impact on the health of consumers must be assessed and monitored.

Biodiversity offers a wealth of untapped potential for livelihoods, health, nutrition and environments. Protection and management of biodiversity (plants, including trees, and animals) is therefore key to locally appropriate diets, sustainable food systems and resilient environments. Nutrition is an ecosystem service and needs to be considered as such along with other ecosystem services such as water and clean air.

The reorientation of food systems and policies, from production-driven to demand-driven will require joint action of all stakeholders. Consumers, and consumer associations, have a key role to play through their purchasing behaviour. Existing dietary guidelines must be updated into sustainable dietary guidelines as the basis for agriculture and food security policies and programmes, as well as consumer information.

The private sector is a major actor of prevailing food systems. The marketing of unhealthy, unsustainable and inappropriate food has led to environmental and public health concerns. The role of food manufacturers and marketers and influence on policy-makers must be clarified. It is clear, however, the many companies have embraced the notion of sustainable sourcing of raw materials and of manufacturing and are providing direction to the sustainable diets movement.

The present polarized approaches pitting processed and unprocessed foods should be overcome and common sense and dialogue between all local stakeholders should be privileged when deciding upon the right combination of activities in a given context. Discussions on sustainable diets have taken place so far at the global level and mostly in high-income countries. It is urgent to move beyond a niche issue to the national level and give priority to pragmatic approaches.

Some countries, including low-income countries, are taking action and face difficulties in establishing sustainable dietary guidelines, policies and programmes. Lack of evidence is a constraint. More operations research, in particular on metrics and baseline data, is urgently needed. And coherence between national guidelines and by regional/global agreements or policies should be a priority

Never has the context been so favourable nor has it been so urgent for addressing malnutrition in a sustainable way: we have one year until the ICN2 *Better Nutrition, better lives*, which aims to provide policy guidance to countries, the Post-2015 Development Agenda including Sustainable Development Goals (SDG) and the 2015 Milano Expo *Feeding the Planet, Energy for Life* and other high-level panels focusing on nutrition and poverty reduction. More than 40 countries have joined the Scaling Up Nutrition ([SUN](#)) Movement and could provide national platforms for inter-sectoral synergies.

Simple, single-nutrient and standard solutions are not possible. We cannot avoid complexity and must learn together how to address it. People should be at the centre of rights-based development strategies, which systematically integrate gender and give youth the active role societies need. It is urgent to analyze, understand and assess inter-connections between technical areas such as natural resources management, food security, economics and health and there is much to learn from traditional and local food systems in terms of sustainability.

Institutional set-up and procedures have to be revisited accordingly from the local level upward. Priority should be given to policy dialogue and coherence, as well joint action-learning in a multidisciplinary context. Practice-based evidence, knowledge management and networking are essential to operationalize and accelerate the shift towards sustainable food systems and diets, with production and consumption within environmental limits. And basically, we need to re-set our moral compass and re-connect nutrition, health with our environment when we plant the seeds of change for a sustainable future.



SESSION 1 - OPENING SESSION INTRODUCED BY FRANCESCO BRANCA, UNSCN

Daniel Gustafson, Deputy Director-General, FAO

This seminar is the sign of the growing recognition of the importance and linkages between nutrition and sustainability and we would like to thank the United Nations System Standing Committee on Nutrition (UNSCN), the government of Flanders and the other organizers to bring us together.

Climate change is an important issue for every sector, and nutrition is no exception. As we speak the 19th Climate Change Conference of Parties (COP19) is being held in Warsaw.

We are looking forward to the second International Conference of Nutrition as a major opportunity to promote sustainable food systems for good nutrition and are looking forward to the outcomes of today's seminar for providing important and relevant input. Let me add that in my view, one of the key challenges we will need to address is that of the necessary institutional set up.

Edith Mkawa, Permanent Secretary, Office of the President's Cabinet, Malawi

Nutrition and Climate Change are crosscutting issues and high on Malawi's political agenda, with a variety of interventions being implemented for climate change adaptation. The President herself is the Minister for Nutrition. Women empowerment is critical for improving nutrition.

The connections between food security, climate change and nutrition should be a priority in the ICN2 agenda. Countries need recommendations for doable actions.

Ann Tutwiler, Director General, Bioversity International

Our global food systems are facing unprecedented challenges and involve a myriad of factors. What is needed is a sustainable food system, which brings together the complex but co-existing goals of economic, social, and environmental sustainability. At present, of more than 50,000 edible plant species in the world, only a few hundred contribute significantly to food supply and just a few crops dominate the energy supply. A diverse, nutritious and safe diet – much like a diverse investment portfolio – offers the opportunity for increased resilience, sustainability, and advances in human health, nutrition, productivity and livelihoods. This seminar represents an invaluable contribution to the understanding of sustainable food systems, why they matter and what we can do to make them a reality.

Of more than 50,000 edible plant species in the world, only a few hundred contribute significantly to food supply and just a few crops dominate the energy supply.

Ann Tutwiler, DG Biodiversity International

Ramiro Lopes da Silva, Chair of the UN System Standing Committee on Nutrition, UNSCN

The funding of this seminar by the Flemish Government is gratefully acknowledged. This seminar takes place at an important moment in time, just prior to the ICN2 and when discussions on the Post-2015 Development Agenda are taking place. It is important to identify practical solutions and operational approaches.

Keynote address “A systemic look at Nutrition and Sustainability”, Hans R. Herren, President, [The Millennium Institute](#)

The pair “Food security and nutrition” has been repeatedly mentioned in the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) “Agriculture at a crossroads¹”, as well as in the Rio+20 Declaration, this in contrast to earlier reports from Sustainable Development summits and shows a growing concern about the nutrition aspect of food security. For a sustainable food system it matters WHAT, WHERE, WHO and HOW we produce and most importantly HOW we consume. We need to take into account energy requirements and climate change.

For a sustainable food system it matters WHAT, WHERE, WHO and HOW we produce and most importantly HOW we consume.

Hans Herren, The Millennium Institute

¹ <http://www.unep.org/dewa/Assessments/Ecosystems/IAASTD/tabid/105853/Default.aspx>

Current food systems face major limitations, in terms of natural resources management (soil degradation, water shortages, biodiversity loss, energy), social equity (industrial agriculture has emptied rural areas instead of providing decent jobs) and consumer health (obesity, noncommunicable diseases).

Agriculture anchored in the basic ecological principles and respectful of its footprint can provide an alternative in terms of crop and animal production, employment, and use of natural resources (energy, land, water and forests). Smallholder farmers are more productive per unit land area than industrial farmers and need increased research and extension support. Women empowerment is essential to the transformation of agriculture and the food system, and so they need special attention when it comes to education, access to land and financial support. Consumers must also play a role in the transformation path of agriculture and food systems. If we want to achieve resilience, it is time to move from linear to systemic thinking and aim for nutrition needs rather than productivity. The multi-functional role of agriculture (for nutrition and health, cultural diversity, income, resilience to climate change) must be acknowledged and encouraged. Agriculture must also transform to become part of the climate change solution, instead of being a major contributor as it is presently. Such a shift will require policy and institutional changes. We need more partnerships, multi-stakeholder discussions and the reform of institutions to address the complexity of nutrition and sustainability.

The follow-up to Rio+20 and the Post-2015 Agenda are excellent opportunities to pursue these discussions.

Q. How do you link this with the policy decision-making sphere?

A. People have to be re-connected to policy-makers, their voice needs to reach from the local to the state level. We need to include in the policy decision-making process all concerned stakeholders, e.g. government, farmers and farmer organizations, consumers, academia, development partners, nongovernmental organizations (NGOs) and the private sector. The key to successful policies is local empowerment and multi-stakeholder ownership of the policy decisions.

Q. How do we address the political implications of a systematic approach?

A. Through democracy: all concerned citizens must have the possibility to voice their needs by using modern dialogue tools such as system dynamics models in multi-stakeholder fora.



We need more partnerships, multi-stakeholder discussions and the reform of institutions to address the complexity of nutrition and sustainability

Hans Herren, the Millennium Institute

SESSION 2 - CLIMATE CHANGE AND NUTRITION – CHAIR: ANNALISA CONTE, WFP

The recent disaster in the Philippines is only one more example of the increasing urgency of the situation and the need to link climate change and nutrition. We are well aware that children born during a drought are more prone to malnutrition.

UNSCN's climate change-related activities to date, Cristina Tirado, PAHO

The UNSCN has been engaging in Nutrition and Climate Change since 2009: COP15 in Copenhagen, COP16 in Cancun, COP17 in Durban and more recently at Rio+20. The UNSCN has set up an on-line discussion group on Nutrition and Climate change which now has around 460 members from 64 countries.

- One of the main achievements of the UNSCN work on Climate Change and Nutrition has been the proposal of a comprehensive framework of analysis of how climate change and variability influence the three key determinants of undernutrition: i) household food access, ii) maternal and child care and feeding practices, and iii) access to health services and environmental health. The UNSCN has contributed to the several publications on Climate

Change and Nutrition with partners such as ACF, PHI, WFP, WHO, FAO, UNDP, IFAD and MRFCJ. Key messages from these documents include:

- A combination of nutrition-sensitive climate adaptation and mitigation measures, nutrition-smart investments, increased policy coherence, and institutional and cross-sectoral collaboration can contribute to address the impacts of climate change to food and nutrition security
- Addressing the gender dimensions of climate change and environmental degradation and their impacts on health and nutrition security is fundamental to effective climate-resilient development strategies.
- Health-promoting nutrition-sensitive agriculture and food policies including the promotion of sustainable food production, sustainable food consumption, and food waste reduction, should be a critical component of the Sustainable Development Goals and the Post-2015 Development Agenda.

For further information on UNSCN and climate change, see

http://www.unscn.org/en/nutrition_and_climate_change/

Hunger – Nutrition – Climate Justice 2013, Damien Kelly, Embassy of Ireland

Nutrition and sustainability must be central in our efforts to reduce poverty and hunger. These issues are complex and need a holistic, human-centered approach.

One of the main development priorities for Ireland's Presidency of the European Union (EU) during the first half of 2013 was to bring the hunger, nutrition and climate agendas together. To this end, the Government of Ireland and the Mary Robinson Foundation - Climate Justice ([MRFCJ](#)) hosted a major international conference in Dublin in April 2013 entitled '[Hunger-Nutrition-Climate Justice](#) – A New Dialogue: Putting People at the Heart of Global Development'

The Conference examined the linked challenges of hunger, undernutrition and climate change and highlighted that we can no longer focus only on the negative effects of climate change on crop yields, and the quality and diversity of food grown. Such tunnel vision ignores the fact that climate change also increases the risk of nutrition by negatively affecting water availability and quality, sanitation systems, food safety and health, thereby contributing in a significant way to the spread of diseases such as diarrhoea which seriously undermine nutrition. Climate change and environmental degradation also negatively affects a mother's ability and time to care for her young children.

Key leaders in global development were placed side-by-side with local people from marginalized communities affected by hunger, undernutrition and climate change at the Dublin Conference. They listened to and learned from local views, practices, coping mechanisms, and the real life experiences of those actually facing the realities of climate change, failed crops, hunger and undernutrition.

Bringing together grassroots people and policy makers works and we need to do it more often.

Damien Kelly, Ireland

Bringing together grassroots people and policy makers works and we need to do it more often. People must be placed at the centre of international policy-making processes and solutions, especially the policy process currently underway to develop the new Post-2015 Agenda in order to devise effective and sustainable solutions and to ensure that this new policy is firmly rooted in the reality of their lives.

The Conference also highlighted that the negative impact of climate change on the food and nutrition security of vulnerable households is an injustice, as they have contributed least to the problem and bear the greatest burden of its impacts.

Climate change and nutrition: the experience of Malawi, Edith Mkawa, Government of Malawi

Malawi has mainstreamed nutrition and climate change in all major policies and given priority to governance at all levels, bringing together agriculture, health, social welfare and education sectors. Synergies with biodiversity, sustainable soil and water management are particularly important.

Political will (from the President down) is very strong in Malawi, as well as the community focus. Within a 'village transformation program' the President provides the communities, and in particular women, with seeds, small animals and cows. The role of media is essential. Whatever plans have been developed at national level must be well-documented in policy and strategy in order to ensure continuity. Community ownership is really the key to sustainability.

Young and Engaged, Isaac Tembo, Timalizge Munthalie, Malawi

Students are aware of the roles they can play in mitigating climate change and enhancing the nutritional status of their country's population. We are taking action to end climate change now to protect future generations. We are engaged in our university and with farmers in promoting environmental-friendly agricultural practices. We are ensuring that their environment is protected through afforestation, reserving natural trees, replenishing trees, irrigation farming, soil and forest management, better farming practices like zero tillage, mulching, and use of compost manure. The environmental awareness team uses drama, social media, youth parliament, radio and television programmes, seminars, birthday parties, extension services, billboards, posters and events as means of communication within their community.



Climate change, nutrition and health: protecting the most vulnerable, Diarmid Campbell-Lendrum, [WHO](#)

The persistent burden of undernutrition is the unfinished health agenda of the 20th century, while poor diets and unhealthy lifestyles are the emerging threat for the 21st century. Malnutrition in all its forms is closely linked to poverty and 80% of the obesity burden falls on low- and middle-income (LMIC) countries. There is therefore an urgent need for poverty alleviation as well as for nutrition programs and emergency responses for malnutrition. The health impacts of climate change are unfairly distributed; the most vulnerable people live in Sub-Saharan Africa.

The way people behave and consume have major implications on local ecosystems. Moderating meat consumption could decrease greenhouse gas emissions, saturated fat intake, cardiovascular diseases (CVD) and certain types of cancer.

Moderating meat consumption could decrease greenhouse gas emissions, saturated fat intake, cardiovascular diseases and certain types of cancer.

Diarmid Campbell-Lendrum, WHO

Health is a strong motivating factor for people to change their behavior. There are therefore big opportunities for triple wins of health, environment and development. We need evidence but the most important issue is how we use this evidence to drive change. Motivation and incentives are key.

Bringing together climate change and nutrition in research and development programs, Elwyn Grainger-Jones, [IFAD](#)

Failures in development projects are usually due to over-simplification and focus on a specific ministry. We need a holistic approach. If we fail on climate we will fail on nutrition. IFAD is providing support to smallholders through its need support, as provided by its ASAP - Adaptation for Smallholder Agriculture Programme. Examples of the integration of nutrition and climate change include the promotion of diversified food systems and landscapes; the incorporation of knowledge on neglected species and the empowerment of rural women.

There is a huge knowledge gap in how to tackle the political economy (conflicts at stake, trade-offs and long term win-wins). We need to combine top-down and bottom-up and learn from local experience.

Linking climate change, food security and nutrition metrics: where are we at? Mark Smulders, [FAO](#)

Climate change impact models are being developed to better understand food security and nutrition implications, especially for some of the most vulnerable livelihood systems. Improved understanding of how different population groups are affected must lead to appropriate policies and investment for climate change impact mitigation. The challenge is to embrace complexity, while being pragmatic in regard to informing policy and investment decisions.

Top-down methods (such as modeling) and bottom-up (community-based assessment and response) are not mutually exclusive. They must complement each other for best possible mitigation measures to be put in place. This is being done within an FAO project in the Philippines, which has 4 components: a multi-sectoral MOdeling System for Agricultural Impacts of Climate Change (MOSAICC); food insecurity and vulnerability analysis of different population groups; livelihood adaptation (community-based) and institutional and policy analysis. The interdisciplinary approach allows us to compare across datasets and sectors and combine quantitative assessments with qualitative analysis.

Linking Health, Climate Change and Sustainability across science, politics and business at the Stockholm Food Forum, Gunhild Stordalen, [Stordalen Foundation](#)

The [Stordalen Foundation](#) focuses on sustainability, climate and health and how to turn corporate responsibility into corporate opportunities.

The [EAT Stockholm Food Forum](#)-project tries to identify overlaps between health/nutrition, food industry and environment/climate; to facilitate international dialogue on food, health and sustainability and to facilitate the development of a global network of academic institutions involved in the food industry.

The food industry has to shift from being part of the problem to being part of the solution. EAT aims to encourage more businesses to innovate by linking sustainability, profitability and competitive advantage.

The EAT Forum will gather academics, politicians, industry and civil society to develop cross-disciplinary guidelines; to spur innovation and to increase public awareness.

Agroforestry: a tool for sustainable nutrition? Patrick Worms, World Agroforestry Centre, ICRAF

Trees are key inputs in many agricultural systems: they improve soil fertility and resilience, and provide nutrition and a number of other useful products and services, from fodder and fuelwood to carbon storage.

Underutilized indigenous trees are a potential treasure trove. Hundreds of species are potentially useful: the fruit of some is far richer in nutrients than better-known exotics. The right combination of local species can provide nutritious food all year long, are locally valued, and are by definition ideally adapted to the local environment.

Within ICRAF's 'Participatory Tree Domestication' (PTD) approach, farmers domesticate the trees they themselves have chosen, and spread the resulting seedlings to neighbors. The approach, which has been ongoing for many years, shows that it is possible to turn biodiversity into nutrition and income while reducing deforestation. The farmers' most encouraging message, however, is that the most resilient systems are those for which farmers take their own responsibility.

Debate

As means of introduction, the Chair reminded participants of the opportunities provided by the SUN Movement and the REACH initiative. WFP and other Rome-based agencies have been actively involved in the development of topics and specialized products, e.g. resilience, insurance, livelihoods protection schemes, early-warning systems, etc. and must strengthen their partnership on climate change and nutrition. It is worth reminding the audience that WFP is the second largest multi-lateral partner in the Climate Change Adaptation Fund.

We talk and act as if evidence would change policy-making, but policy-makers have their own agendas. Sustainable change will not come top-down but only from participation of the people concerned. People are rendered vulnerable by a system that is unfair and unjust. Post-2015 should be our priority. We need to go beyond SUN and inter-disciplinarity.

Zambia expressed strong interest in the Malawi experience and challenges. It is essential that countries can share information and lessons learnt.

Overall, we know what is good for sustainability, health and climate, but how do we make it happen? People often have no choice in terms of funding availability.

We need to provide stronger support to household food production and in particular user-friendly educational material. The example of the EU-funded project in El Salvador showed that families below poverty level with very high stunting rates with no water and sanitation could improve their health substantially through producing safe fruits and vegetables with low input techniques and incorporating them in their traditional diets.

Food and nutrition security should be seen as a global public good. Food is a basic need like air and water. The private sector is about making a profit, not supplying a global public good. Public-private partnerships are strongly encouraged but we should ensure that they do not determine policies.

A concept note is presently being developed within the CGIAR Research Programme on Agriculture for Nutrition and Health². And FAO hosts a data-base on nutrients in indigenous foods.

SESSION 3 – SUSTAINABLE DIETS – CHAIR: ANN TUTWILER, BIOVERSITY INTERNATIONAL

“Sustainable diets: global challenges and what are the issues at stake?”,
Tim Lang, [City University London](#)

Reshaping food systems around sustainable diets is among the big challenges for the 21st century. The problem is not just agriculture, but the kind of food systems we have created in the late 20th century. The processes of tackling malnutrition and sustainability that countries like Malawi are undertaking is important and inspiring but we need to give equal attention to the pressures caused by how developed countries consume. Rich societies must massively reduce their food systems’ environmental footprints. They are living beyond planetary limits, yet their food systems are too often held up as role models for developing countries. We need to reconfigure all food systems – both developed and developing countries’ - around addressing social, environmental and public health impacts. In short, this means designing food systems to meet ecological public health criteria.

In meeting this challenge, nutrition sciences themselves must be more integrated. The life sciences currently dominate nutrition, but ecological public health also requires us to tap into other nutritional traditions that see food as societally and environmentally determined. Interdisciplinary collaboration is needed, if the world is to tackle both noncommunicable diseases (NCDs) and the impact of food on climate change, water and biodiversity. Ecological public health thus inevitably needs us to face modern cultural pressures on consumption. We need to start talking again of nutritional well-being, a concept which disappeared with the consumerist model in the name of the freedom to eat whatever we want, all day, and cheaply. Nutrition sciences must help define what eating within limits means. Much current advice implies people have more choice than they do. We need policies and guidelines to be more coherent and integrated.

In this process of reorientation, we can draw much from civil society organizations (CSOs) taking a lead. Some companies, too, are beginning to recognize they must change. This may be for self-protection or brand image reasons, of course, but not always. They see the evidence and want long-term futures, but lowering individual products’ footprints is not the same as reducing the impact of entire populations. Right now it is Governments who are lagging behind. They must catch up! We need them to help reshape policy frameworks. Ultimately only governments have the democratic mandate to ‘chair’ the process of reframing markets and messages.

² <http://www.cgiar.org/our-research/cgiar-research-programs/cgiar-research-program-on-agriculture-for-nutrition-and-health/>

They must pull consumers and companies together, and to aim for consistent messages that are alive to the scientific complexity but sufficiently simple to give coherent cultural direction.

Part of our modern food problem is that the policy frameworks we inherit from the past assumed a world of limitless resources. In the 21st century, we now know this is a fantasy. We need policies to address the treble burden of over-, under- and mal-nutrition, while addressing food's environmental and societal impacts. One shift almost certainly needed is to focus more on horticulture. Meat and dairy have their place but are sensitive issues, we know, from environmental and health impacts. We must reorient intensive western meat systems with their huge cereal inputs into more sustainable modes of production.

The pursuit of sustainable diets from sustainable food systems is the 21st century goal. It sounds simple but it will require important changes to local, national and international frameworks. We have much work to do.



We need to reconfigure all food systems – both developed and developing countries' - around addressing social, environmental and public health impacts. In short, this means designing food systems to meet ecological public health criteria.

Tim Lang, UCL

Biodiversity and sustainable diets, Barbara Burlingame, FAO

Biodiversity includes ecosystems, the species within those ecosystems, and the genetic diversity within species, i.e., subspecies, varieties of plants, breeds of animals.

Food has long been included on the list of ecosystems services. More recently, whole diets and nutrients for human nutrition have been formally acknowledged as ecosystem services.

There are many reasons for differences in nutrient contents, but within-species diversity is a major reason. For example, the differences in pro-vitamin A carotenoid content between one variety of banana and another can be more than 1000-fold. Nutritionally significant varietal differences are found for every food species studied.

No food laboratory or pharmaceutical company can reproduce the complexity of a food for all its beneficial bioactive compounds, matrices, balances and dependent interactions. The loss of biodiversity means loss nutrients and beneficial bioactive non-nutrients. The International Rice Commission made an important recommendation that could be adopted by other similar bodies: “Before engaging in genetic modifications the nutrient composition and existing biodiversity should be analyzed”. The FAO/INFOODS Food Composition Database for Biodiversity currently contains several thousand data points. “Agro-biodiversity and food and nutrition security cannot be separated, and yet we have separated them”.

Nutrient requirements cannot be satisfied without dietary diversity, including biodiversity. Sustainable solutions to the multiple problems of malnutrition cannot be found without the coordinated engagement of health, agriculture and environment sectors.

Putting sustainable diets into practice: experience from LMIC, Jessica Fanzo, [Columbia University](#)

The challenge is how to translate the sustainable diet concept into practice. A variety of sustainable diets initiatives are underway in LMIC countries such as Brazil (green economies and school meals), Malawi (integrated farming), Nepal (home garden ecosystems) or Timor Leste (capacity building for the promotion of local foods).

More research is needed to understand how these programs impact diets; to assess and measure sustainability of diets; and how to assess the impact of sustainability.

Programming for such initiatives must be improved in several areas: guidance as to what is a sustainable diet; considering nutrition as ecosystem service; providing incentives and increasing consumer demand (with a focus on children and youth).

Nutrition recommendations for sustainable diets: the experience of Finland, Sirpa Sarlio-Lähteenkorva, Ministry of Social Affairs and Health, Finland

The Finnish Government emphasizes the incorporation of health and sustainable development goals in all sectors and several pilot projects on sustainable diets are presently ongoing (e.g. ‘environmental passport’ for

catering services). Sustainability is being incorporated into Finnish dietary recommendations but this process is facing a variety of constraints, which has delayed the official publication.

It is challenging to cover various dimensions of sustainability (climate change, use of resources, chemical load, biodiversity, social and economic impacts etc.) and the evidence-base for decision-making is limited. The great variation on composition data within the same food category makes it difficult to give general advice.

Communication among the public, policy-makers, media and civil servants needs to be improved. The challenge is ultimately to combine health and environment aspects in the plate of consumers. Dietary advice should always be practical and adapted to the local situation.

Joining forces for sustainable food systems, James Lomax, [UNEP](#) (by video)

There is no silver bullet for a sustainable diet as its definition is dependent on context which varies from country to country and within countries in terms of availability of resources, production system, culture and traditions.

One of the concrete outcomes of Rio+20 was the resolution to set up a 10-year international framework for working on sustainability called the 10-Year Framework of Programmes on Sustainable Consumption and Production. Three years ago, FAO and UNEP started to work together on developing a sustainable food system programme for inclusion in this framework covering production, consumer behaviour, enabling conditions and supply chain efficiency of the food system. Developing a sustainable diets approach to policy-making in food systems is a key aspect of this programme.

In order to better understand what impact this approach can have, we need to better understand the trade-offs between productivity goals, the environment and health/nutrition goals. Making the case for change is clear – for example economically we cannot go on subsidizing food production and paying for the health and environmental consequences.

Time to rethink the food systems for a sustainable diet? Martine Padilla, [IAMM](#)

Different diets have different environmental footprints. Vegetarian diets consume less water and land and are therefore interesting in a context of climate change and increased water scarcity.

The present food system is too complex and needs to be revisited as it generates losses and waste, is based on standardized products - which reduce biodiversity - , and alters nutrients along the food chain. In order to assure the sustainability of the food system, contextualized reflexions will be needed on alternative solutions and tradeoffs, such as plant-based diets vs. animal-based diets; organic vs. conventional products; in-season vs. out-of-season products; local vs. imported products; short supply chains vs. long supply chains. Nutrition education tends to put the responsibility on consumers. We need to make the supply system accountable to “make the right choice, the easy choice”.

Livewell, Duncan Williamson, [WWF](#)

Food systems are the biggest threat for the planet. We have more than enough evidence to identify the main problems associated with the current food system, and what healthy, sustainable diets should be. The lack of a complete evidence base is not an excuse for inaction.

Fossil fuel subsidies have enabled the production of cheap food. Monoculture (soy, palm oil) are destroying ecosystems rapidly. Food systems need to respect ecological boundaries.

Eating healthily, eating less meat and following the guidelines nutritionist have been telling us for years, is key. If people just follow their national dietary guidelines, this is a first simple step to an equitable, healthy, sustainable food system. WWF's Livewell for Life program has demonstrated that it is possible to define healthy sustainable diets. We have done this for 4 countries – UK, France, Spain and Sweden.

Join *Eating Better* <http://www.eating-better.org> – a coalition made up of health, development, social and environmental NGOs all supporting the same message around sustainable food choices. We need to get out of our silos and work together.

Debate

Too much is expected from consumers, governments have to take responsibility and change prices to accommodate healthy goals.

Animal protein, in particular for individuals with specific nutritional needs, is still generally perceived as essential to good nutrition. We must be careful not to generalize: meat and dairy products can be very relevant in specific contexts. Livestock systems must be based on the agro-ecological context and can produce ecosystem services. Countries like Brazil lose biodiversity because of soy for livestock.

If there is an economic case for sustainable diets; taxes, incentives, regulation and subsidies, trade policies and public procurements, need to be realigned.



SESSION 4 - THE WAY FORWARD - CHAIR: JOMO SUNDARAM, FAO

Food Security and Nutrition in the post 2015 agenda, Santiago Menéndez Luarca, Spain

The Madrid High-Level Consultation on Hunger, Food Security and Nutrition in the Post-2015 Development Framework³, which brought together a wide range of high-level experts, policy-makers and leaders on 4 April 2013, was the culmination of the Global Post-2015 Thematic Consultation on Food security and Nutrition, which was co-led by FAO and WFP and co-hosted by the Governments of Spain and Colombia. The background paper Food Security and Nutrition for All - A Vision and Building Blocks for a Global Agenda⁴ built upon an electronic consultation facilitated by the Global Forum on Food Security and Nutrition - FSN Forum (in which the UN Standing Committee on Nutrition - and therefore many of you – played a key role), followed by a Committee on World Food Security (CFS) consultation. It is therefore no surprise if many of the issues raised today (sustainability, human rights and governance, gender equality and the need to integrate food-based responses with public health interventions at all levels) were discussed.

The Post-2015 Agenda will not only need to have a clear objective on ending hunger and malnutrition, but this will have to be connected to multi-disciplinary strategies to address underlying causes and their multiple interconnections. The CFS expects to play a key role in supporting this agenda. There must be no doubt that this is a major opportunity for a radical change from business as usual towards the world we want.

The motto of the ICN2 *Better Nutrition, Better Lives* goes in the same direction. We look forward to the next three days to move these discussions further.

Food Security and Nutrition in the post 2015 agenda, Felipe Steiner, Colombia

The Post 2015 process is defining a new vision for a sustainable and universal future. Goals and objectives will need to complement and address the gaps and weaknesses of the Millennium Development Goals (MDG) process.

All of us will need to rise to the challenge, contribute to multi-sectoral approaches, share responsibilities for priority areas and promote the sustainable well-being of rural and urban populations. We also need more convergence at regional and global levels around issues such as biofuels, subsidies, etc.

Linking Climate Change, Diets and Right to Food, Flavio Valente, FIAN

So far nutrition has been addressed with a very narrow lens and the determinants of malnutrition have been ignored. Major obstacles to sustainable nutrition include policies that subsidize harmful practices (expansion of the agro-industrial model, including the production of biofuels), socio-economic inequity (responsible for both

³ <http://www.worldwewant2015.org/fr/node/334291>

⁴ http://www.fao.org/fsnforum/post2015/sites/post2015/files/files/Vision_and_Building_Blocks_for_Global_Agenda.pdf

under- and overnutrition), limited promotion and protection of women's human rights, land grabbing and violence against people by business.

We need more coherence between policies and human rights. People's rights and human dignity should be at the heart of development. States have the obligation to avoid policies that harm people and the environment, and to protect people's human rights against abuses perpetrated by the corporate sector.

Governments must recognize smallholder agriculture and support it. Private sector should revisit marketing practices that focus on money without any concern for health or environment, and the corporate sector should be kept away from the public policy space.

Some advances have been made with the CFS reform, the high level panel of experts, the approval of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests, the discussions about nutrition and agriculture. There is progress but some countries still refuse to allow 'food sovereignty' to be debated in policy fora.

There is hope, but we need a change of paradigm and we must avoid transferring to developing countries the mistakes done in the developed world. People should have a voice in ICN2.

Nutrition and sustainability in the international research agenda Mark Holderness, [GFAR](#)

Nutrition is now firmly on the international research map. A variety of interventions are needed to address malnutrition and we must move towards a comprehensive agenda integrating international and national actions (including the CGIAR CRP Agriculture for Nutrition and Health; food composition; the development of opportunity crops etc.).

We must go beyond "either... or..." approaches based on single nutrition interventions, move from considerations of agricultural productivity to nutritional quality and access to nutrition, and bring together scientific knowledge and local knowledge. We need evidence of what works in practice and recognize this will differ in different contexts.

Farmers have their own knowledge and innovation and need to be put at the center of decision-making. People's demands should shape agricultural research, which should be reframed with a gender lens, through to even the questions being asked in research. Research is currently mainly driven by the concerns of men (e.g. yields and direct income), rather than those of women (e.g. time, labour and household nutrition, post-harvest processing and value). This will require institutional reorientation, capacity building and supportive policies.

We need to reimagine the role and scope of agriculture and its interaction with reducing poverty and malnutrition. And we need to develop new value systems and associated metrics to measure progress of agricultural and food systems for their nutritional value and their success in meeting nutritional needs of the poor, not just by gross tonnage produced or traded.

The Sustainable Development Solutions Network Jeffrey Sachs, [Earth Institute](#) (by video)

Food and energy are the two biggest challenges for sustainability. We need to feed a rapidly rising population but the way we produce food is so environmentally damaging, it is the number one sector causing climate change.

In 2012, the UN Secretary-General asked for a global knowledge network – the Sustainable Development Solutions Network ([SDSN](#))⁵, which links universities and research centers that look at local and regional solutions. I would like you to join us. The work of FAO, UNSCN and others that are assembled here today can make a great contribution.

The Sustainable Development Goals (SDGs) includes three areas where food and nutrition is central: sustainable agriculture and food supply; health for all; early-child development and education.

Nutrition and agriculture are intimately related and must be properly integrated into the Post-2015 Agenda. The cooperation between the nutrition community and the agricultural community must be further strengthened to jointly define standards and guarantee universal access to these standards. It would be good to have a goal and target on child nutrition and one on adult nutrition and wellbeing (NCDs). I am keen to promote the nutrition community insights and make the links with the food-growing community.



⁵ <http://unsdsn.org>

Germany's commitment to food and nutrition security and sustainability, Hanns-Christoph Eiden, German Federal Office for Agriculture and Food

Malnutrition affects all of us, puts a heavy burden on all of us. Malnutrition is not only an issue for developing countries. In Germany for example 20% of the population is obese, the quality of life is decreasing and health care costs increase.

There is an overall need for action everywhere. Progress can only be reached, if all policy sectors concerned and business as well as civil society get involved. Agriculture plays an important role, when it comes to fight malnutrition. Farmers do not only have to produce enough food, it is also their task to produce diverse and nutritious food, which is available and affordable.

In this respect sustainable production is key. As one cannot think agriculture without nutrition, one also has to help farmers to adapt their production methods to changes due to climate change, and one has to take into account the impacts of agricultural production on our environment.

Sustainability of our food and energy systems is a priority in the political debate in Germany. We need solutions that are sustainable in the broad meaning of the term: responding to ecological needs, culturally acceptable and economically viable. The German government supports research on organic farming and biodiversity, as well as animal welfare and protein-rich crops in order to implement a more bio-based economy. And sustainable production has become a marketing issue.

Germany is aware of the global dimension of the issues of sustainability and adequate nutrition. It therefore supports initiatives to realize the human right to adequate food and nutrition and it wishes to put the issue on the ICN2 and beyond in the Post-2015 Agendas.

Contributions from the floor and closing remarks

Emile Frison, ex-Director-General Bioversity International, expressed his appreciation of the progress made since 2009 but stated that there was still a long way to go: the connection between the different sectors needs to be enhanced; there are many promising field experiences but they must be diversified and upscaled. He agreed with Duncan Williamson that the message must get out to the public now, as wider buy-in is essential for timely change. We must start from what we know and start applying it. Top-down approaches will not work, and as Hans Herren explained in the morning, we cannot wait to get it right.

Florence Egal, UNSCN consultant, insisted on the need for local approaches to generate practice-based evidence, for multi-disciplinary research teams to study food systems, for knowledge management (including retrieval of indigenous knowledge, networking and dissemination of good practices), and on the role of urban consumers in reorienting food production. Food systems should be based on territorial planning and build upon urban-rural linkages (re-localization of diets, shorter food chains, post-harvest employment generation).

The problem is not so much that of poverty, but that of disparity. Each of us should think of what we can do rather than limit ourselves to formulating what governments should do.

The Session Chair concluded by wishing that the outcomes of the seminar guide the ICN2 discussions.

ANNEX 1: PARTICIPANTS LIST



Nutrition and Sustainability Seminar: A practical approach to integrating climate change, biodiversity and ecosystems, nutrition and health agendas

Rome, Italy

12 November 2013

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ANNEX 2: SEMINAR PROGRAMME



Nutrition and Sustainability *A practical approach to integrating climate change, biodiversity and ecosystems, nutrition and health agendas*

Tuesday, 12 November 2013
08.00 to 18.00
Green Room
[FAO Headquarters, Building A, Rome, Italy]

This seminar is jointly organized by the UN Standing Committee on Nutrition [UNSCN] (www.unscn.org), Biodiversity International (www.biodiversityinternational.org), the Food and Agriculture Organization of the United Nations [FAO] (www.fao.org) and the Government of Malawi, with support from the government of Flanders. It aims to raise awareness and encourage partnerships on linking nutrition, climate change and ecosystems and promote sustainability of countries nutrition policies and programmes.

Tuesday, 12 November 2013	
Time	
7:45-9:00	Registration of participants
09:00-10:00	Plenary Opening Session
09:00-9:30	<p>Welcome address: (5 minutes each)</p> <p><i>Daniel Gustafson - FAO Deputy Director-General</i> <i>Edith Mkawa - Permanent Secretary Office of the President's Cabinet - Malawi</i> <i>Ann Tutwiler - Bioversity International Director-General</i> <i>Ramiro Lopes da Silva - UNSCN Chair</i></p>
09:30-10:00	<p>Keynote address</p> <p><i>"A systemic look at Nutrition and Sustainability" Hans R. Herren - The Millennium Institute</i></p>
10:00-10:30	Coffee break
10:30-13:00	Session 2: Climate Change and Nutrition – (Annalisa Conte, WFP)
10:30-10:35	<i>"UNSCN's climate change-related activities to date", Cristina Tirado, PAHO adviser</i>
10:35-10:45	<i>"Hunger – Nutrition – Climate Justice 2013", Damien Kelly, Embassy of Ireland</i>
10:45-10:55	<i>"Climate change and nutrition: the experience of Malawi", Edith Mkawa, Malawi</i>
10:55-11:05	<i>Young and Engaged – Isaac Tembo, Timalizge Munthali, Malawi</i>
11:05-11:15	<i>"Climate change, nutrition and health: protecting the most vulnerable", Diarmid Campbell-Lendrum, WHO</i>
11:15-11:25	<i>"Bringing together climate change and nutrition in research and development programs" Elwyn Grainger-Jones, IFAD</i>
11:25-11:35	<i>"Linking climate change, food security and nutrition metrics: where are we at?" Mark Smulders, FAO</i>
11:35-11:45	<i>"Linking Health, Climate Change and Sustainability across science, politics and business at the Stockholm Food Forum" Gunhild Stordalen, Stordalen Foundation</i> <i>"Tree diversity for health, fuel and nutrition" Patrick Worms, The World Agroforestry Center</i>
11:45-13:00	Discussion and contributions from the floor Concluding remarks (Chair)

13:00-14:00	Lunch break
14:00-16:00	Session 3: Sustainable diets (Chair Ann Tutwiler, Bioversity Int.)
14:00-14:05	<i>Opening Remarks (Chair)</i>
14:05-14:30	<i>"Sustainable diets: global challenges and what are the issues at stake?" Tim Lang, City University London</i>
14:30-14:40	<i>"Biodiversity and sustainable diets" Barbara Burlingame, FAO</i>
14:40-14:50	<i>"Putting sustainable diets into practice: experience from LMIC" Jessica Fanzo, Columbia University</i>
14:50-15:00	<i>"Nutrition recommendations for sustainable diets: the experience of Finland" Sirpa Sarlio-Lähteenkorva, Ministry of Social Affairs and Health, Finland</i>
15:00-15:10	<i>"Joining forces for sustainable food systems", James Lomax, UNEP (by video)</i>
15:10-15:20	<i>"Time to rethink the food systems for a sustainable diet?" Martine Padilla, IAMM</i>
15:20-15:30	<i>"Livewell" Duncan Williamson - WWF</i>
15:30- 16:00	Discussion and contributions from the floor Concluding remarks (Chair)
16:00-17:45	Session 4: The way forward (Chair: Jomo Sundaram, FAO)
16:00-16:05	<i>Opening Remarks (Chair)</i>
16:05-16:15	<i>"Food Security and Nutrition in the post 2015 agenda" (Santiago Menéndez de Luarca, Spain and Felipe Steiner, Colombia)</i>
16:15-16:25	<i>"Linking Climate Change, Diets and Right to Food" Flavio Valente, FIAN</i>
16:25-16:35	<i>"Nutrition and sustainability in the international research agenda" Mark Holderness, GFAR</i>
16:35-16:45	<i>"The Sustainable Development Solutions Network" Jeffrey Sachs, Earth Institute (by video)</i>
16:45-16:55	<i>"Germany's commitment to food and nutrition security and sustainability" Hanns-Christoph Eiden, German Federal Office for Agriculture and Food</i>
16:55-17:45	<i>Contributions from the floor</i> <i>Closing remarks (Chair)</i>
18:00-19:00	Cocktail Aventino Room (caffetteria), 8th floor

NUTRITION AND SUSTAINABILITY



A Long-term Vision for Effective Strategies

The **Nutrition and Sustainability Seminar** was organized by the Government of Malawi, Bioversity International, FAO and the UNSCN to bring together people working on nutrition, food systems, climate change, health, the environment and other areas to discuss and review options in the context of sustainability *per se*, and sustainable development targets and goals. This seminar took place on 12 November 2013 at FAO Headquarters in Rome. It was an opportunity to inform the International Conference on Nutrition (ICN2) Technical Preparatory Meeting held on the following three days, 13 to 15 November. The Seminar included technical sessions on Climate Change and Nutrition, Sustainable Diets as well as presentations from a wide array of government, UN and nongovernmental organizations.

The linkage between climate change and nutrition is significant. Healthy and resilient food systems will contribute to both healthy diets and climate change mitigation; nutrition, diet and food systems both influence, and are affected by, climate change. Addressing the cross-cutting issues of climate change and nutrition jointly is a means to bring together natural resources, sustainability, food security and health agendas. We need healthy environments and we need sustainable diets for a healthy planet. Both climate change and nutrition should therefore be mainstreamed throughout sectoral policies and strategies at all levels, including agriculture, environment, health, education and social protection.

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