High Level Panel of Experts report on Nutrition and Food Systems: e-consultation 29 January 2016

World Cancer Research Fund International and the NCD Alliance support the High Level Panel of Experts Steering Committee decision to examine the links between nutrition and food systems in the context of implementing the Sustainable Development Goals (SDGs) and commitments made at the Second International Conference on Nutrition (ICN2). Different types of food systems exist around the world with varying impacts on diets, nutrition and health. Food systems are complex and involve economic, social and environmental dimensions, making it necessary to take a multidisciplinary approach to understand how food systems impact nutrition and how they can be leveraged to end malnutrition in all its forms worldwide.

Our comments will primarily focus on the overweight and obesity side of the malnutrition spectrum, simply because this is our area of expertise.

About World Cancer Research Fund International

World Cancer Research Fund International leads and unifies a network of cancer prevention charities with a global reach. We are the world's leading authority on cancer prevention research related to diet, nutrition, weight and physical activity. We work collaboratively with organisations around the world to encourage and enable governments and policymakers to adopt and implement effective policy actions to promote healthy diets, reduce obesity and prevent cancer and other non-communicable diseases (NCDs).

World Cancer Research Fund International's landmark *Second Expert Report: Food, Nutrition, Physical Activity and the Prevention of Cancer: a Global Perspective*[1] (2007) provides a systematic review and assessment of the worldwide body of evidence on food, nutrition, physical activity and 17 cancers and cancer survivors. The report is the most comprehensive analysis ever published on the links between food, nutrition, physical activity and cancer prevention.

Since the launch of the Second Expert Report, World Cancer Research Fund International has continued to collate the findings from all new cancer prevention research published around the world for our *Continuous Update Project*[2] (CUP). The CUP analyses the findings of cancer prevention research, using the same rigorous methodology of the Second Expert Report to ensure that our Cancer Prevention Recommendations[3] remain based on up-to-date evidence.

More information about World Cancer Research Fund International can be found at www.wcrf.org

[1] http://www.wcrf.org/int/research-we-fund/continuous-update-project-cup/second-expert-report
[2] http://www.wcrf.org/int/research-we-fund/continuous-update-project-cup
[3] http://www.wcrf.org/int/research-we-fund/our-cancer-prevention-recommendations

About the NCD Alliance

Founded in 2009 and led by seven international NGO federations – Alzheimer's Disease International, the Framework Convention Alliance, the International Diabetes Federation, the International Union Against Tuberculosis and Lung Disease, Management Sciences for Health, the Union for International Cancer Control, and the World Heart Federation – the NCD Alliance is a unique civil society network working towards a world free from preventable suffering, disability and death caused by non-communicable diseases (NCDs).

With a global network of more than 2,000 organisations in 170 countries and strategic relations with the World Health Organization, relevant UN agencies, and governments, the NCD Alliance works to meaningfully integrate NCDs into global and national health and development plans and frameworks. Our network includes global and national NGOs, scientific and professional associations, academic and research institutions, private sector entities and dedicated individuals.

The NCD Alliance's activities aim to strengthen policy, increase accountability and mobilize resources to ensure the achievement of global and national NCD commitments, broker knowledge and good practice, and support capacity development of national and regional NCD civil society organisations and alliances. Our achievements include supporting the adoption of landmark political commitments on NCDs – including the 2011 UN Political Declaration on NCDs, the global 2025 NCD targets, the 2014 Outcome Document of the UN High-Level Review on NCDs, as well as the adoption of a standalone NCD target as part of the new Sustainable Development Goals.

More information about the NCD Alliance can be found at www.ncdalliance.org

We will provide comments on the following issues identified in the Issues Note on Nutrition and Food Systems

1. How and why do diets change?

Urbanisation, industrialisation and migration

1.1 Changes in urbanisation, industrialisation and migration rates have influenced patterns of production, consumption of food and patterns of disease and population health, initially in Europe, North America and other economically advanced economies, but now also at an accelerated rate in low and middle income countries (LMICs).[4]

1.2 The migration of populations, alongside urbanisation and industrialisation play a large part in how and why diets have changed; moving from a 'gatherer-hunter' food system (with diets high in dietary fibre and low in sugar) to a 'peasant-agricultural' food system (with diets low in dietary fibre but high in cereals, complemented by animal protein) to an 'urban-industrial' food system (with diets low in dietary fibre and starchy staple foods, but high in processed foods, salt, sugar and fats).

1.3 The 'urban-industrial' food system has distinct characteristics, whose original purpose was to ensure reliable and adequate supplies of food of an agreed minimum nutritional quality. Technological advances resulted in new food-preservation techniques, including bottling, canning, refrigeration and packaging, as well as an extensive use of sugar and

[4] World Cancer Research Fund / American Institute for Cancer Research. Food, Nutrition, Physical Activity, and the Prevention of Cancer: a Global Perspective. Washington DC: AICR, 2007.

salt. However, these advances and the policies and processes of globalisation have significant impacts on the types of food that are available and affordable.[5]

Nutrition transition

1.4 These substantial changes to our food system are referred to as the 'nutrition transition', where proportionally our dietary energy is increasingly coming from animal sources, fats, oils and added sugars. During the last several decades, these demographic, nutritional and epidemiological transitions have also taken place outside of high-income countries due to economic globalisation. For example, in most LMICs, sales of sugar-sweetened beverages in daily calories per person are increasing[6], and the cost of fresh fruit and vegetables is rising while processed foods are getting cheaper[7].

Globalisation

1.5 The processes and policies of globalisation have played a big role in the type of food that is available and affordable, encouraging trade and foreign direct investments that favour transnational corporations (TNCs), including food and beverage companies. TNCs greatly influence the sale and consumption of unhealthy, processed foods, driving a shift in dietary patterns that is closely linked to the increase in non-communicable diseases (NCDs), including cancer, cardiovascular disease and diabetes.[8]

1.6 In 2007, global average available energy was predicted to rise from around 2800 kcal/person per day (1997-1999 average) to 3050 in 2030. As a result of the nutrition transition, people have generally become taller and heavier, accompanied by a change in the patterns of disease at the population level.

2. How do changes in food systems affect changes of diets, and therefore health and nutritional outcomes?

2.1 Evidence suggests that the 'urban-industrial' food system initially may have lowered the rates of nutritional deficiencies and infectious diseases, especially in early life, in LMICs. However, globally rates of childhood overweight, obesity and type 2 diabetes have become common, even reaching epidemic proportions. We are now experiencing a 'multiple burden of malnutrition', where stunting, wasting, micronutrient deficiencies and overweight & obesity co-exist, affecting individuals, families and entire populations.

2.2 Compelling evidence from studies of migrant populations suggests that the main causes of cancer are due to environmental factors, rather than genetic inheritance. Population movements from LMICs to high-income countries showed accompanying marked changes in the patterns of diet and disease, within one to two generations. The conclusion reached is that genetic pools of migrating populations do not change within one to two generations, but environmental exposure can and does alter patterns of DNA damage and gene expression.

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[5] Hawkes, C, et al, 'Linking agricultural policies with obesity and non-communicable diseases: a new perspective for a globalising world', quoted in *Report by the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health: Unhealthy foods, non-communicable diseases and the right to health* (A/HRC/26/31 2014, p.6)

[6] Hawkes, C and Popkin, B. 2016. Sweetening of the global diet, particular beverages: patterns, trends and policy responses *The Lancet Diabetes and Endocrinology* 4(2): 174-186.

[7] Wiggins, S et al. 2015. The rising cost of a healthy diet. Overseas Development Institute

[8] Hawkes, C, 'Uneven dietary development: Linking the policies and processes of globalisation with the nutrition transition, obesity and diet-related chronic diseases', quoted in *Report by the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health: Unhealthy foods, non-communicable diseases and the right to health* (A/HRC/26/31 2014, p. 5)

2.3 NCDs, including cancer, cardiovascular disease, diabetes, and respiratory disease make the largest contribution to mortality both globally and in the majority of LMICs. Worldwide, NCDs account for 60% (38 million) of global deaths. The largest burden – almost three quarters of NCD deaths (28 million) and 82% of the 16 million premature deaths - occur in LMICs, making NCDs a major cause of poverty and an urgent development issue[9]. NCDs will be the leading global cause of disability by 2030. Globally, the NCD burden will increase by 17% in the next ten years, and in the African region by 27%. The highest absolute number of deaths will be in the Western Pacific and South-East Asia regions.[10]

3. What are the determinants of the changes in consumption?

3.1 Changes in consumption are inextricably linked to changes in diet (see question one). Dietary diversity is key for good nutrition and tends to increase following a rise in income. However this is often then followed by the addition of more processed food and food items that tend to be high in fats, salt and sugar, leading to poorer health outcomes (described in question two).

3.2 Three main domains influence food consumption: the food environment, food system and behaviour change communication. These domains are outlined in World Cancer Research Fund International's NOURISHING framework[11] (Figure 1), which identifies ten policy areas that are needed to promote healthier diets and reduce obesity and NCDs. Implementing policies across these areas influences the availability, accessibility, affordability, acceptability and awareness of nutritious foods.

Food preferences, food preparation time, urbanisation and household income

3.3 Other factors that influence consumption include food preferences, food preparation time, urbanisation, and household income. Food and taste preferences are shaped early in life and can track into adulthood. Policies can help shape healthy food preferences through four key mechanisms: providing an enabling environment for healthy preference learning; overcoming barriers to the expression of healthy preferences in these environments; encouraging people to reassess unhealthy preferences; and stimulating a positive foods systems response.[12]

3.4 Food preparation time and convenience are increasingly factors that affect food consumption, especially populations in urban areas. Decreased time (or perceived time) for food preparation, diminishing food preparation skills, and a drive for convenience have contributed to diets higher in processed foods that are more energy-dense.

3.5 Urbanisation influences the availability of foods by increasing the diversity of what's available, but also increases the availability of out-of-home venues, which tend to serve less healthy food.

3.6 Household income remains a main driver of food consumption across contexts and influences the quality of the diet depending on the food system.

Climate change

3.7 Climate change also influences people's food consumption by influencing food availability (local and global), quality and access (e.g. price). Seasonal variation and climate shocks also impact food and nutrition security.

[9] WHO Global Status Report on non-communicable diseases 2014
[10] NCD Alliance: http://www.ncdalliance.org/globalepidemic
[11] http://www.wcrf.org/int/policy/our-policy-work/our-policy-framework-promote-healthy-diets-reduce-obesity
[12] Hawkes C, et al. 2015. Smart food policies for obesity prevention. *The Lancet* 385(9985): 2410-2421

4. What is the role of public policy in promoting healthy, nutritious and culturally appropriate food for all?

4.1 Public policy is central to the promotion of healthy, nutritious and culturally appropriate foods for all and is a form of government action that includes legislation, regulation, decrees, standards, policies, programmes and fiscal measures. The vast majority of policy actions developed and implemented to promote healthier diets have been in high-income countries.

Creating an enabling environment for effective policy action

4.2 Government is the primary duty bearer in developing and implementing policy. To help ensure a more enabling environment for effective policy action to improve nutrition, many steps can be taken by both governments and UN agencies as outlined in the ICN2 Framework for Action[13] and the 2015 Global Nutrition Report[14]:

- Improve governance and political economy, including strengthening and establishing multi-sectoral mechanisms for nutrition
- Enhance capacity and resources
- Provide evidence to support action in a format accessible to policymakers
- Frame issues in a compelling way
- Enhance political commitment
- Align policies across ministries and agencies
- Promote inter-country collaboration and information exchange

SMART political commitments

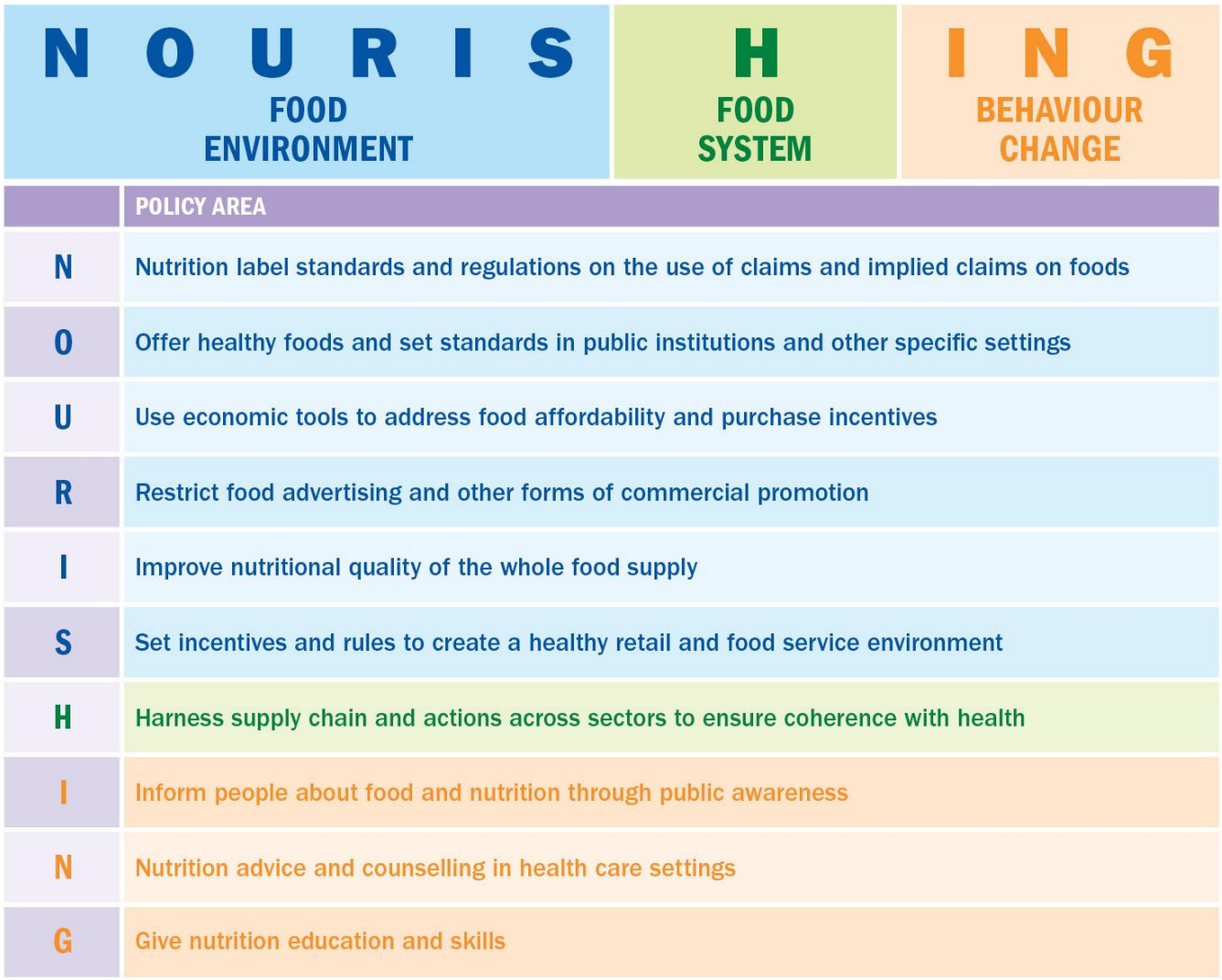
4.3 Governments have made commitments to improve nutrition through existing global frameworks including the nine global NCD targets and the WHO NCD Global Action Plan 2013-2020, the WHO Global Monitoring Framework on Maternal, Infant and Young Child Nutrition and Agenda 2030 for Sustainable Development, as well as the ICN2 outcome documents: Rome Declaration and Framework for Action. It is imperative that these commitments translate into national action in order to make progress in addressing malnutrition in all its forms. To date, progress has been uneven and insufficient bringing into question the feasibility of meeting established global targets. Governments need to set and implement national level targets and SMART (Specific, Measurable, Attainable, Relevant, Time-bound) political and financial commitments and receive support from UN agencies to do so.

A comprehensive approach

4.4 To promote healthy, nutritious and culturally appropriate foods, a comprehensive package of policies across the food environment, food system and behaviour change communication that involve multiple sectors is needed, as outlined in World Cancer Research Fund International's NOURISHING framework (Figure 1). No single policy action is going to be effective.

[13] http://www.fao.org/3/a-mm215e.pdf
[14] http://globalnutritionreport.org/the-report/

Figure 1 World Cancer Research Fund International's NOURISHING framework



Policy coherence

4.5 The complexity of food systems must be taken into account in the development and implementation of public policy to improve nutrition. Food systems have four domains: health, environmental, social and economic, and policy can impact these domains across four dimensions: quantity, quality, distribution and resilience.[15] Nutrition assessments of policies across sectors are needed to create food systems that promote good nutrition. In addition, the interconnectedness of policies across sectors and policy coherence need to be assessed in order to achieve the desired impact and avoid unintended consequences.

4.6 To facilitate this knowledge exchange and understanding of interconnectedness, more effective multi-sectoral platforms are needed to assess the cross-cutting impacts across sectors on nutrition and ensure policy coherence. Examples of such platforms internationally include the United Nations Inter-Agency Task Force on NCDs, UN Standing Committee on Nutrition, Commission on World Food Security, and at country-level include National NCD Commissions, e.g. in the Caribbean[16].

[15] Nesheim, MC, Oria, M and Yih, PT. 2015. A framework for assessing the effects of the food system. Washington DC: Institute of Medicine and National Research Council.

[16] http://www.healthycaribbean.org/meetings-june-2015/june-5/resources/A-Civil-Society-Report-on-National-NCD-Commissions-in-the-Caribbean-Towards-a-more-Effective-Multisectoral-Response-to-NCDs-Part-1.pdf

Life course approach

4.7 Nutrient provision in the first thousands days (from conception to the age of two) impacts the health of a child and also impacts later risk of disease in adulthood. For example, stunted children are vulnerable to obesity later in life[17]. Coherence across policies addressing malnutrition in all its forms is key to ensure policies address both undernutrition and obesity/nutrition-related NCDs synergistically. "Double-duty actions" do exist and more should be identified that can help address both undernutrition and overweight & obesity synergistically (e.g. healthy food procurement in schools).

5. What is in practice the range of actionable solutions from farm to fork that enable better nutritional outcomes of food systems?

Actionable solutions

5.1 Policies across sectors[18] have the potential to enable better nutrition outcomes of food systems. World Cancer Research Fund International's NOURISHING policy database[19] provides a regularly updated list of implemented policy actions from around the world that help promote healthier diets. A handful of examples, drawn from the database, are outlined in Table 1, as well as how they can impact nutrition and food systems.

Impact

5.2 More research is necessary on the impact of implemented government policy actions (including intermediary outcomes), as well as the area of value chain analysis due to the complexity of the food supply chain. Metrics are also needed to assess how food systems are linked and affect health outcomes.

Table 1: Policies that can influence nutritional outcomes of food systems

Policy area[20]	**Potential policy actions**	**Examples of policy actions[21]**	**Impact on foods systems and/or nutrition**
Nutrition label standards and regulations	e.g. nutrient lists on food packages, clearly visible 'interpretive' labels on foods and menus	**Chile** (2015) – front-of-package warning labels on foods that exceed specified limits for calories, saturated fat, sugar and sodium. **Ecuador** (2013) – "traffic light" labelling in which levels of fats, sugar and salt are indicated by red (high), orange (medium) or green (low). **South Korea** (2010) – mandatory menu labelling in all chain restaurants (with >100 establishments) including energy, total sugars, protein, saturated fat and sodium.	Nutrition labelling can influence industry to reformulate their products – this can help populations more broadly access foods of higher nutritional value.

[17] WHA Global Nutrition Targets 2025: Stunting Policy Brief: http://www.who.int/nutrition/topics/globaltargets_stunting_policybrief.pdf

[18] When looking at the range of actionable solutions, consider extending 'farm to fork' to 'farm to waste', recognising the sustainability aspect of food systems impacts both health and the environment.

[19] www.wcrf.org/NOURISHING

[20] Policy areas taken from World Cancer Research Fund International's NOURISHING framework: www.wcrf.org/NOURISHING

[21] Sourced from World Cancer Research Fund International's NOURISHING policy database: www.wcrf.org/NOURISHING

Offer healthy foods and set standards in public institutions	e.g. nutrition standards in schools, workplaces and health facilities, fruit & vegetable programmes in schools	**EU School Fruit Scheme** (2009/2010) – provides financing to support national school fruit and vegetable programmes **Brazil** (2009) – mandatory food- and nutrition-based standards for foods available in the national school meal programme. **South Korea** (2010) – "Green Food Zones" ban sale of fast foods and soda within 200 metres of schools **France** (2005) – vending machine ban in schools **US** (2008) – NYC Food Standards set nutritional standards for all food purchased or served by city agencies.	Making fruits and vegetables available in schools increase consumption. Food standards restricting the availability of 'unhealthy foods' reduce consumption of these foods.
Use economic tools	e.g. targeted subsidies, health-related food taxes	**Mexico** (2014) – 10% sugary drinks tax **US** (2009) – revisions to Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) improved the composition and quantities of WIC-provided foods **US** (2006) – NYC 'Health Bucks' program provides incentive for low-income people to allocate spending to fruits and vegetables	Emerging evidence from implemented taxes indicate decreases in purchases of taxed drinks (e.g. Mexico). Targeted subsidies have been shown to overcome affordability barriers to healthy food.
Restrict food marketing	e.g. regulations restricting **all** forms of marketing to children that promote unhealthy diets	Countries with mandatory regulation of: - **broadcast food advertising to children**: Chile (2015), Iran (2004), Ireland (2013), Mexico (2014), South Korea (2010), United Kingdom (2007) - **non-broadcast communications channels**: Chile (2015), South Korea (2010) - **any medium**: Peru (2013) Countries with mandatory regulation of: - **food marketing in schools**: Chile (2015), Poland (2014), Spain (2011), Maine, US (2007), Uruguay (2013)	Evidence shows that marketing influences children's food preferences and habits. Food preferences influence food consumption.
Improve nutritional quality of the whole food supply	e.g. reformulation to reduce salt, fat and sugar, elimination of trans fats, portion size limits	**Argentina** (2013) – salt law sets maximum salt-levels for widely consumed foods **UK** (2006) – voluntary salt reduction targets were set for 80 food groups	Changes to the food supply change people's food consumption. Evidence from salt

		Denmark (2003) – trans fat law bans the sale of products containing trans fats	reduction indicates that people's tastes can change.
Set incentives to create healthy retail and food service environments	e.g. planning restrictions on food outlets, incentives for shops to sell healthy products	**Singapore** (2011) - Healthier Dining Programme encourages food operators to offer lower calorie meals and use healthier ingredients (e.g. oils with reduced fat and/or whole grains) **US** (2005) – 'Shop Healthy NYC' works with residents, food retailers and food suppliers and distributors to increase access to healthy foods.	The food environment influences food consumption.
Harness the food supply chain	e.g. supply-chain incentives for production, public procurement, health-in-all-policies, governance structures for multi-sectoral engagement	**US** – Executive Orders in NYC (2008) and Massachusetts (2009) establish nutrition standards for all foods purchased and served by public entities. **Brazil** (2009) – law requires that 30% of national budget for food served in school meals programme is spent on foods from family farms **United Nations** – UN Standing Committee on Nutrition promotes cooperation among UN agencies and partner organisations in support of community, national, regional and international efforts to end malnutrition in all its forms.	Procurement standards have repercussions for upstream actors and activities in the food system.
Inform people about food & nutrition through public awareness	e.g. education about food-based dietary guidelines and healthy eating, community and public awareness campaigns	**Australia** (2012) – 'LiveLighter' public health campaign to encourage people to eat healthily and be physically active to maintain a healthy body weight.	Awareness is one factor that influences what people eat.
Nutrition advice in health care settings	e.g. nutrition advice for at-risk individuals, telephone advice and support, clinical guidelines for health professionals on effective interventions for nutrition	**Brazil** – nutrition is part of comprehensive health care and provided by all services within Brazil's system of universal health coverage.	People can benefit from nutrition advice provided by their health care provider.
Give nutrition education & skills	e.g. nutrition, cooking/food production skills on education curricula, workplace health schemes	**England** (2014) – national curriculum includes mandatory hands on cookery for children up to Year 9. **Singapore** – employers are encouraged to establish a workplace nutrition programme based on guidelines provided by the Health Promotion Board.	Nutrition knowledge is positively correlated with healthy dietary behaviour.

6. What action should different stakeholders, including governments, civil society and the private sector, take?

6.1 All sectors have a role in ensuring farms and food systems produce food that's affordable, diverse and healthy. Therefore, a multi-sectoral, whole of society, whole-of-government approach is needed to improve nutrition and food systems.

We believe that the following stakeholders should take the following actions:

Governments should:

- Provide strong political leadership championing a multi-sectoral, whole-of-society approach
- Set national nutrition targets and develop and implement multi-sectoral and integrated national nutrition plans covering the full spectrum of malnutrition in all its forms
- Ensure policy coherence across sectors within government
- Develop food-based dietary guidelines[22]
- Develop and implement SMART financial and political commitments
    - Develop a mechanism to monitor and enforce these commitments
- Create and enforce stronger government frameworks to regulate industry

Academia should:

- Identify actions that address both undernutrition and obesity/nutrition-related NCDs synergistically
- Conduct more research on the impact of implemented policy actions
- Carry out more value chain analysis to help understand the complexity of the food supply chain and identify potential policy levers within it to improve nutrition
- Clarify factors that can create an enabling environment for improving nutrition

Industry should:

- Support efforts to create and shape healthier environments within which people make decisions
- Make available a wide range of affordable and accessible foods that support good nutrition
- Increase transparency and accountability to improving nutrition

Civil society should:

- Raise awareness and mobilise support for implementing existing financial and political commitments to improve nutrition
    - Monitor actions and hold governments to account, including highlighting where progress is lacking
- Support governments in identifying SMART financial and political commitments
- Strengthen collaboration between organisations and actors working either on undernutrition or obesity/overweight and non-communicable diseases

UN agencies should:

- Provide technical support to countries wanting to develop country-level nutrition targets and multi-sectoral, and integrated nutrition plans covering the full spectrum of malnutrition in all its forms
- Provide technical support to governments in identifying SMART financial and political commitments
- Support the implementation of the ICN2 Framework for Action

[22] Following the example of Brazil: http://www.fao.org/nutrition/education/food-dietary-guidelines/regions/brazil/en/

    - WHO & FAO: develop objective and verifiable SMART indicators for the implementation of all actions listed in the ICN2 Framework for Action
- Mobilise support for a Decade of Action on Nutrition from Member States to strengthen action and accountability on malnutrition in all its forms