

The **High Level Panel of Experts**  
on Food Security and Nutrition (**HLPE**),  
**Science-policy interface** of the  
Committee on World Food Security (**CFS**)

2<sup>nd</sup> HLPE note on  
*Critical and emerging issues for FSN*

**Patrick Caron, HLPE Steering Committee Chairperson**  
CFS 44 Plenary Session – FAO HQ, Rome  
13 October 2017

# HLPE Roles (as per CFS rules)

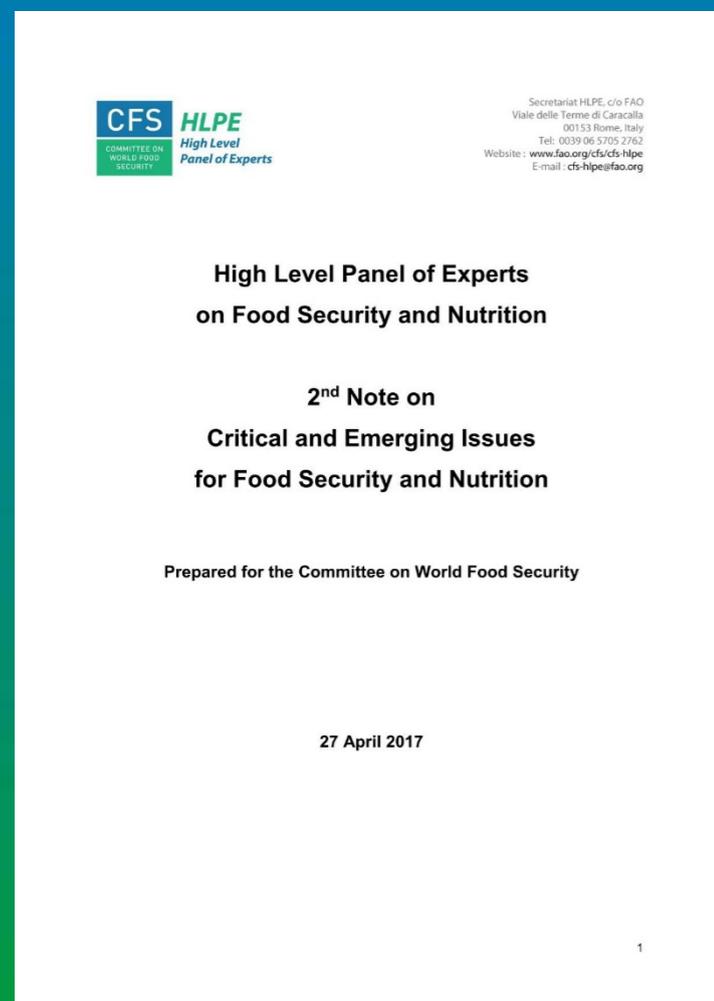
- (i) Assess and analyze the **current state** of food security and nutrition and its underlying causes.
- (ii) Provide scientific and knowledge-based analysis and advice on specific **policy-relevant issues**, utilizing existing high quality research, data and technical studies.
- (iii) Identify **emerging issues**, and help members prioritize future actions and attentions on key focal areas.

# In 2016, CFS requested the HLPE:

To produce a second note on *Critical and emerging issues* (C&EI) for FSN,

providing insights, through an evidence-based perspective, built on the knowledge of diverse actors

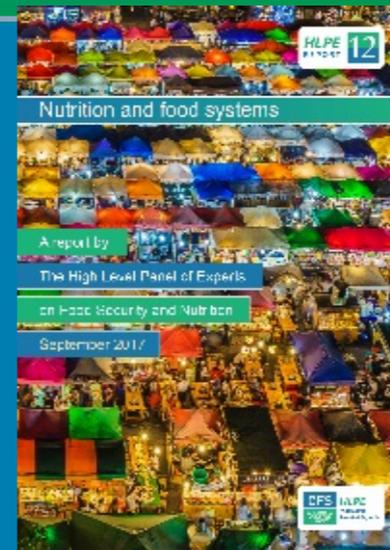
(2<sup>nd</sup> August 2016, confirmed by the Plenary in October 2016)



[http://www.fao.org/cfs/cfs-hlpe/  
critical-and-emerging-issues/en/](http://www.fao.org/cfs/cfs-hlpe/critical-and-emerging-issues/en/)

# First note 2014: 5 interrelated issues

**Healthy nutrition**



**Livestock systems**



**Inequalities**



?

**Role of financial markets**



?

**Pathways to sustainable food systems**



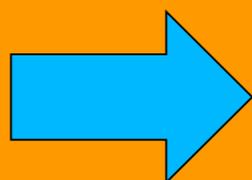
# C&EI, an inclusive and evidence-based process

CFS Bureau request

Open on-line Enquiry

Synthesis

46 sub-  
themes



6 clusters

9 issues for further attention

Draft note

Peer review

Release of the Final note to CFS

*The inclusiveness of the process is an outcome in itself*

3 Conferences

Available evidence

Previous HLPE Reports

# Results of inquiry 2014 - 2017

	2014	2017
<b>Knowledge organizations, institutions and knowledge networks</b>	<b>90 issues</b> (from 25 sources out of 77 invited)	<b>104 issues</b> (from 38 sources out of 181 invited)
<b>Open consultation</b>	<b>42 issues</b> (from 28 sources)	<b>70 issues</b> (from 42 sources)
<b>Total</b>	<b>132 issues</b> <b>590 pages</b> <i>from 53 contributors</i>	<b>174 issues</b> <b>915 pages</b> <i>from 80 contributors</i>

174 issues raised have been screened to highlight similarities and classified in 6 broad “**thematic clusters**”:

1. Climate change and natural resource management
2. Nutrition and health
3. Food chains
4. Social issues
5. Governance
6. Knowledge and technology

# An innovation: Conferences

Direct interaction between knowledge holders and decision-makers

The HLPE co-organized 3 conferences:

- Columbia University (New York City, USA, May 2016) : discuss the process
- Hohenheim University (Stuttgart, Germany, September 2016)
- Agropolis International and the UNESCO Chair on World Food Systems (Montpellier, France, December 2016)

## Main issues raised

1. FSN in conflict areas and role of women
2. Capturing complexity and integrating knowledge systems
3. Ecologically sound, adaptive and resilient agricultural ecosystems
4. Addressing power imbalances to transform food systems
5. Consumption patterns and sustainable diets

## Main issues raised

1. Social dimensions of FSN, human right and human dignity
2. Agroecology
3. Organization of food supply chains
4. Territorial approach: governance at different scales
5. Competition to access resources, exclusion, conflicts and migrations
6. One Health, animal welfare

# C&EI and the 2030 Agenda

The 174 issues raised could be classified in 5 blocks

FSN		Thematic clusters	SDGs
<b>Dimensions</b>	<b>Availability</b>	Climate change and natural resource management  Food chains	<b>SDG6</b> (Water) <b>SDG7</b> (Energy) <b>SDG12</b> (Sust. Production) <b>SDG13</b> (Climate change) <b>SDG14</b> (Oceans) <b>SDG15</b> (Terrestrial ecosyst.)
	<b>Access</b>	Food chains  Social issues	<b>SDG1</b> (Poverty reduction) <b>SDG5</b> (Gender) <b>SDG8</b> (Economic growth, employment) <b>SDG9</b> (Infrastructures) <b>SDG10</b> (Inequalities) <b>SDG11</b> (Urbanization)
	<b>Utilization</b>	Nutrition and Health	<b>SDG3</b> (Health) <b>SDG12</b> (Sust. Consumption)
	<b>Stability</b>	Climate change and emerging conflicts and migrations	<b>SDG1</b> (Poverty reduction) <b>SDG8</b> (Inclusive economic growth) <b>SDG10</b> (Inequalities) <b>SDG13</b> (Climate change) <b>SDG16</b> (Peace)
<b>Means of implementation</b>		Governance  Knowledge and technology	<b>SDG4</b> (Education) <b>SDG16</b> (Institutions) <b>SDG17</b> (Means of implementation and partnerships)

# 1. Anticipating the inter-connected future of urbanization and rural transformation

Rapid urbanization:

30% people in cities in 1950,  
66% in 2050.

Cities: a **powerful driver of change** and **innovation** in urban / rural areas

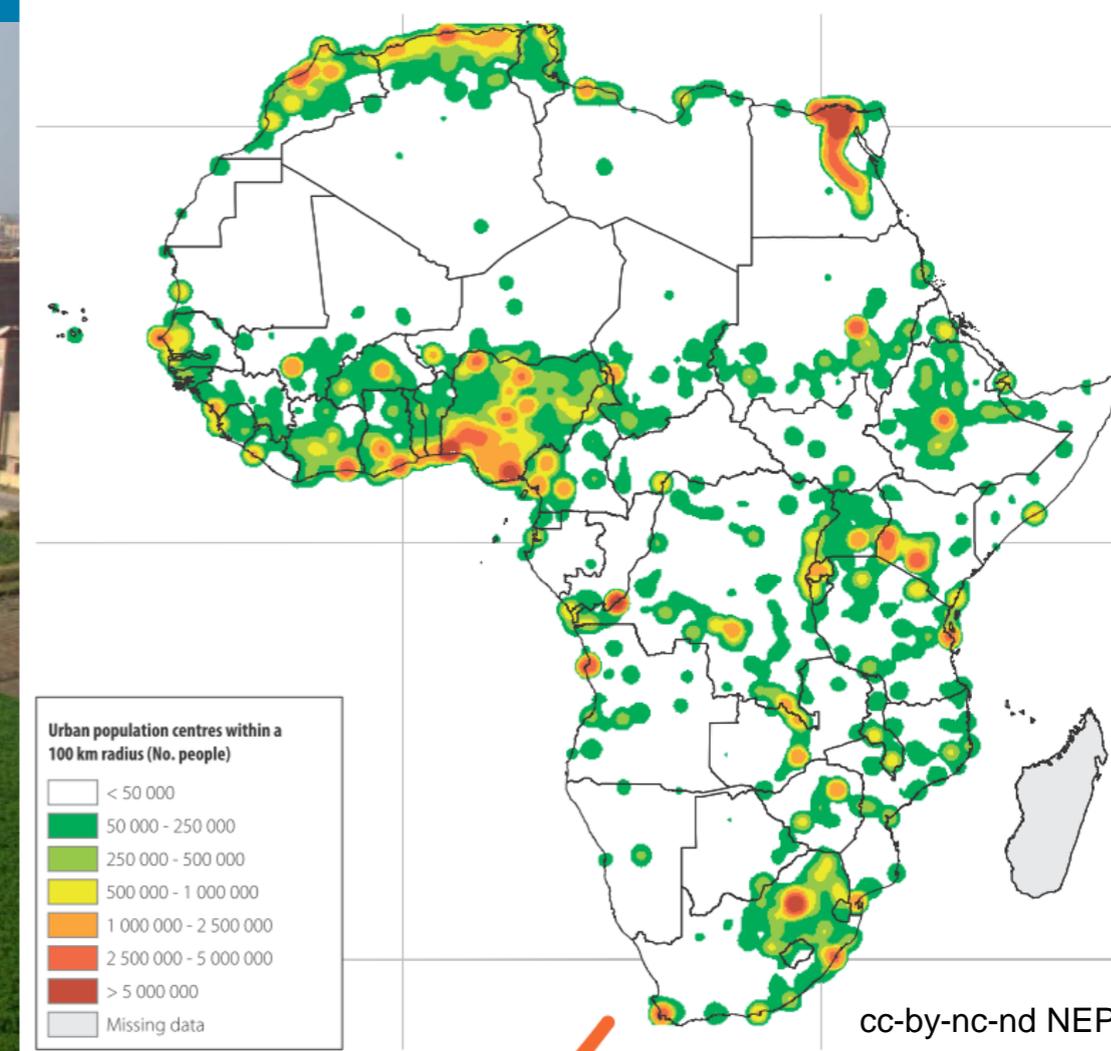
- Feeding huge cities?
- Changes in urban dietary patterns and food environments ?
- Rural–urban linkages and migration ?



24624\_0191b.jpg © FAO/Ami Vitale / UNFAO

**M8. Urban population centres within 100km radius**

Source eGeopolis 2016



cc-by-nc-nd NEPAD

## 2. Conflicts, migrations and FSN



24880\_3938.jpg © FAO/Giuseppe Carotenuto / UNFAO



24880\_0249.jpg © FAO/Giuseppe Carotenuto / UNFAO

Increasing number of international migrants (conflicts, natural disasters, shocks and crises)

173 million in 2000

244 million in 2015

- How do food systems operate in times of conflict?
- FSN consequences of conflicts?
- Designing food systems resilient during conflicts and crises?

# 3. Inequalities, vulnerability, marginalized groups and FSN (reviewing C&EI, 2014)



Photo by: [www.flickr.com/people/santarosa/](http://www.flickr.com/people/santarosa/)

One of the main causes of food insecurity and malnutrition

- Reducing for improved FSN?
- Reducing inequalities to build peace and prevent conflicts and migration?
- Empowering women and youth employment programmes for social justice and better FSN?



24831\_8740.jpg © Sebastian Liste/NOOR for FAO / UNFAO

# 4. Impacts of trade on FSN

Photo credit: Maersk



Growing importance of international trade in food and agriculture:

1 /6 people obtain their staple calories from international trade

1 /2 by 2050

- Capturing the “true costs of production”?
- Power imbalances and increasing concentration in food and agriculture commodity markets?
- International trade strategies and rules that respect national FSN objectives and needs?
- Rebuild a common basis for multilateral negotiations?

# 5. Agroecology for FSN in a context of uncertainty and change

Gaining traction and challenge to harness contributions of such innovative approaches

- Contribution to resource efficiency; strengthen resilience; secure social equity / responsibility?
- Integration of different knowledge systems?
- enabling conditions?



Photo: Ricky Martin/CIFOR

# 6. Agrobiodiversity, genetic resources and modern breeding for FSN



248830012.jpg © FAO/Andrew Esiebo / UNFAO



24823077.jpg © FAO/Vladimir Valishvili / UNFAO

Improving resource efficiency and strengthening resilience to biotic and abiotic threats and shocks... Yet:

30 crops / 95 % of food energy needs  
75 % food production / 12 commercial crops and five animal species

- Diversification of crop species?
- Participatory breeding initiatives and seed systems?
- Protecting agrobiodiversity?
- Global regulations for modern breeding?

# 7. Food safety and emerging diseases

Food safety, food-borne diseases, antimicrobial resistance: major challenges.  
In 2010: 31 food-borne hazards = 600 million food-borne illnesses and 420 000 deaths  
Comparable with major infectious diseases

- International and national initiatives to be strengthened and developed to address food-borne hazards?
- Adapting them?
- Large-scale industrial agricultural model supplying global value chains more or less likely to result in greater food safety incidents? Localized food systems?



Photo: ILRI/Hardisman Dasman

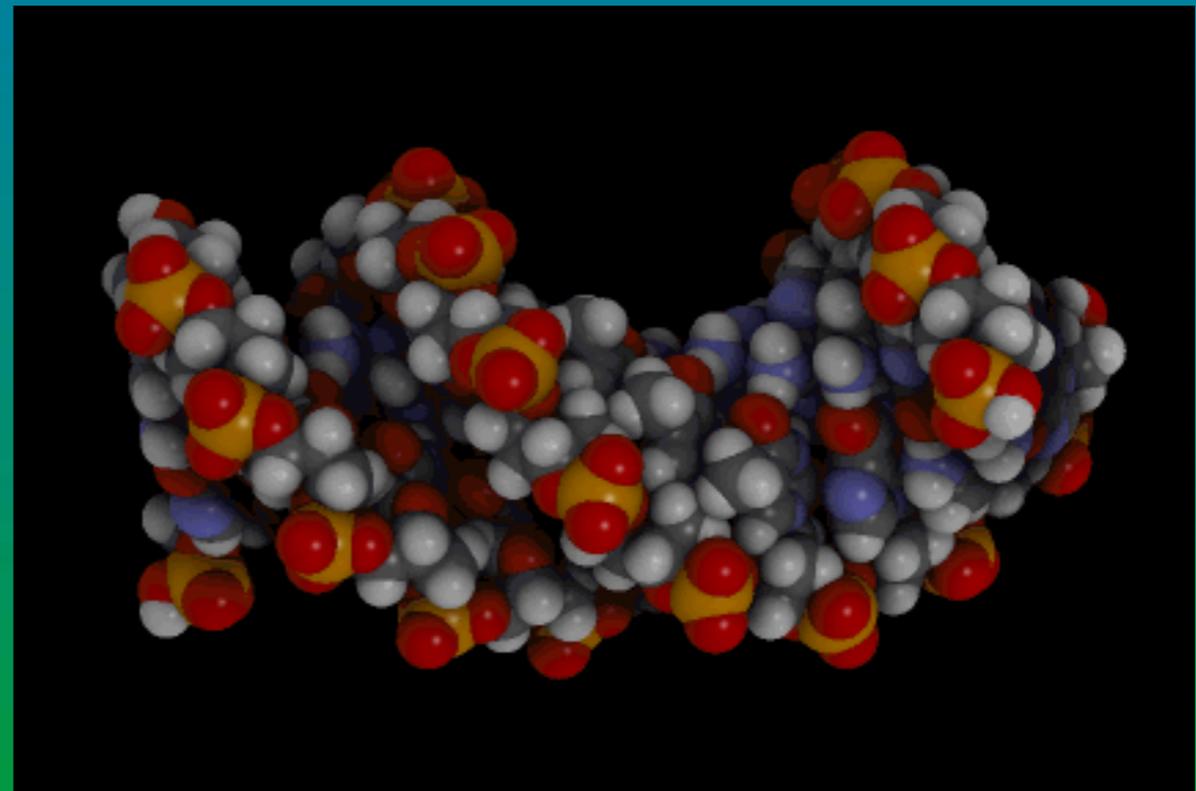


24852\_0052.jpg © FAO / UNIFAO

# 8. From technology promises towards knowledge for FSN

Science, technology and innovation : engine in the past, pivotal in the future.  
Taking stock of modern science advances (e.g. genetics, data) and knowledge  
Positive and negative impacts: risks, mistrust and controversies  
Technology gap/ adapted innovation, including insecure people

- Knowledge and technologies for FSN?
- Processes, partnerships, regulations and institution?
- Technology related risks through regulatory frameworks?
- Which metrics?



# 9. Strengthening governance of food systems for an improved FSN

To steer transformation, inclusive and inter-sectoral governance mechanisms are needed at all scales:

policy coherence across scales and sectors

specific issues (erosion of diversity, power imbalance, footprints, etc.)

- Local initiatives through territorial approaches?
- Inclusive and intersectoral functioning of policies and institutions?
- Innovation and institutions for FSN and alignment of local, national and international arrangements?
- FSN concerns in global agreements and conventions? trade-offs impacting FSN?



# Past HLPE reports... and SD: a global narrative

