**Call for good practices and lessons learned on food security and nutrition policy implementation in Europe and Central Asia region**

**Template for submissions**

FAO’s Project “[Developing Capacity for Strengthening Food Security and Nutrition in Selected Countries of the Caucasus and Central Asia](http://www.fao.org/fsnforum/GCP/GLO/674/RUS" \t "_blank)” (funded by the Russian Federation), in collaboration with the [Global Forum on Food Security and Nutrition](http://www.fao.org/fsnforum" \t "_blank) and the [FAO Regional Office for Europe and Central Asia](http://www.fao.org/europe/en/" \t "_blank), is pleased to invite you to share**good practices** and**lessons learned** on food security and nutrition policy implementation in the region.

**Please use this [submission form](http://bit.ly/2nAitb1" \t "_blank) to share your examples and experiences.  
For the necessary background and guidance, please refer to the website:** [www.fao.org/fsnforum/eca/activities/open-calls/FSN\_policy\_implementation](http://www.fao.org/fsnforum/eca/activities/open-calls/FSN_policy_implementation)

**You can upload the completed form to the FSN Forum** [www.fao.org/fsnforum/eca/activities/open-calls/FSN\_policy\_implementation](http://www.fao.org/fsnforum/eca/activities/open-calls/FSN_policy_implementation) **or send it via email to** [fsn-moderator@fao.org](mailto:fsn-moderator@fao.org)**.**

**Author of submission** (name, surname, position, organization)

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| Professor Melgar-Quinonez, Director, McGill Institute of Global Food Security |

**Title of your example**

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| Improving collaboration and knowledge exchange using FIES in Central Asia |

**Theme**

**☐**Sustainable food systems for improved nutrition

**☐**School food and nutrition programs linked to the agricultural sector

**☐**Nutrition sensitive social protection programs;

**X** Governance and accountability for nutrition.

**Date, location and geographic scope of your example (regional, sub-regional, national, local)**

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| We feature the use of FIES through the Voice of the Hungry Project as an accurate and easily understood tool that can be used to enhance food security governance in Central Asia. |

**Main responsible entity(ies) for the implementation of your example**

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| The Food and Agriculture Organization (FAO) launched the Voices of the Hungry (VoH) project with the experiential based measure - the Food Insecurity Experience Scale (FIES) in 2013. |

**Key objectives and implementation approach of your example** (approximately 600 words)

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| Food security presents a longstanding challenge to the countries of Central Asia. After Perestroika, as the region transitioned from a planned to market economy, social and economic life declined and poverty increased (Brück et al, 2010). Ten years later, countries experienced a measure of success. To illustrate, Kakwani and Son (2016) estimated that between 2002 to 2012 food insecurity decreased across populations in the region: in Kazakhstan 3.32% to 0.02%, Kyrgyzstan 21.91% to 1.71%, Tajikistan 22.46% to 2.36%, and Turkmenistan 22.845 to 1.22%. Economic crisis in the form of the 2007-08 food price hikes resulted in substantial deterioration in global food security (Headley, 2013), with negative impacts on the Central Asia region. The World Food Programme estimated that food insecurity increased from 8% in 2008 to 14% by 2010 (CFSVNA, 2016). And in Uzbekistan, where domestic production of foodstuffs is estimated to meet 80% of national demand, iron deficiency anemia is still present in 61% of children under 3 and 60% of women of reproductive age (Payziyeva and Paiziev, 2012). This situation suggests that measures are needed that go beyond national level estimates of caloric availability per capita since by themselves they provide an inadequate picture of food access to an adequate and balanced diet.  Further, food insecurity among the vulnerable often worsens when faced by production related challenges, such as climate variability, underdevelopment, single export crop focus (Lioubimtseva and Henebry, 2009); and global economic crisis (Headley, 2013). Factors such as, heterogeneity in country characteristics, and existing capacities of the food and nutrition security system provide additional challenges to local and regional policymakers. For countries of Central Asia, more evidence-based policy making will need to become an important part of enhancing national capacities in devising policies, monitoring coping strategies, and directing welfare impacts to the vulnerable (Brück et al. 2014). Discussions in the food security literature have highlighted how measures can enhance food security governance by supporting clear and participatory decisions and action; building/upgrading of efficient, transparent and accountable institutions based on the rule of law and equity in service delivery; and, produce coherent and coordinated policies and action by partnering institutions (Pérez-Escamilla, 2012). In the absence of measures and data that are fine-grained to the region, evidence based policy making in Central Asia will remain difficult (Falkingham, 1999; Brück et al. 2014). Five main methods can be used to assess food insecurity: estimates of calorie availability per capita (national level); household income and expenditure surveys (household); dietary intake (individual or household); anthropometry (individual); and, food insecurity experience-based scales (individual or household) (Pérez-Escamilla and Segall-Corrêa, 2008). Of all these tools as the region moves away from production-side measures, there is a need to better understand and measure food access. While existing measures have varied strengths, food experience scales, such as FIES, appear to meet the requirements of the Central Asia context (see Annex 1). |

**Funding and technical assistance of your example** (approximately 200 words)

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| We show how FIES as a new measurement tool, can support coordination of stakeholders, measure changes in food insecurity in the short term and improve evidence-based decision making in response to crises. In an effort to improve global, national and local measures of food insecurity, Food and Agriculture Organization (FAO) launched the Voices of the Hungry (VoH) project. VoH developed the experiential based measure Food Insecurity Experience Scale (FIES), which has been refined and translated into over 200 languages and dialects. The scale developed out of work on the U.S. HFSSM and ELCSA (Ballard, Kepple, and Cafiero, 2013), and shows flexibility across scales since it can be applied to both household and individual levels. Added benefits of FIES include its simplicity in design, easy administration and interpretation, timeliness of results, and low costs (Ballard, Kepple, and Cafiero, 2013). The eight psychometric questions of FIES allow policymakers insights into the real experiences of the food insecure by measuring behaviors and experiences that arise in response to declining food access, from no to mild-anxiety and worry about food running out, to compromised diet quality, and reduced dietary consumption (Nord, Cafiero, and Viviani, 2016). |

**Key stakeholders involved. Describe the cross-sectoral coordination mechanism of your example, if any** (approximately 300 words)

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| There has been growing appreciation for the role of stakeholders to improve food and security governance. Historically, global responses by institutions responsible for agri-food policy focused on promotion of production side responses with technological and market-based approaches (Zilberman et al., 2012). This includes the G8 launched agricultural research and investments effort called the [L’Aquila Food Security Initiative](http://www.g8italia2009.it/static/G8_Allegato/LAquila_Joint_Statement_on_Global_Food_Security%5B1%5D,0.pdf) in 2009 (https://www.one.org/us/policy/what-is-the-laquila-global-food-security-initiative/). In 2011, The Russian Federation launched the Eurasian Center for Food Security (ECFS), established at Lomonosov Moscow State University as part of an “[Agricultural Development Aid Cooperation](http://www.minfin.ru/common/gen_html/index.php?id=12742&fld=HTML_MAIN)” featuring partnerships with UN agencies; multilateral agencies, and research centers <http://ecfs.msu.ru/en/content/about-eurasian-center-food-security-455>. More recent changes to global food systems, primarily associated with globalization processes (Conway, 2013; Gomez et al, 2013), have highlighted the need to better coordinate an increasing number and diversity of stakeholders (Pinstrup-Andersen, 2009). These efforts seek to improve governance by bringing together global, regional and national actors to better exchange ideas, information and develop solutions to food insecurity. One recent example was the World Bank’s online consultation to support improved collaboration with experts and stakeholders in the region as part of  [a “Network and Partnerships in the area of Food Security”](http://ecfs.msu.ru/en/events/online-consultation-network-and-partnerships-area-food-security-589)(World Bank, 2016). |

**How your example addresses food security and nutrition challenges. Describe linkages to social protection policies / school food programs / sustainable food systems** (approximately 600 words)

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| We feature the findings of the FIES through the Voice of the Hungry Project for our analysis. We obtained data from 2014 to 2016 Gallup World Poll (GWP) with a sample from five Central Asian countries namely Armenia, Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan (n=15,000). FIES was used as the dependent variable. Based on cut-off points from FAO, we summed up the questions and recoded them into four categories; 0” food secure”, 1” mild food insecurity (FI)”, 2” moderate FI”, 3” severe FI”. Financial life index, which measures both personal as well as community economic condition, was used as an independent variable. Covariates such as, gender, age, education, employment, area of residence, and income quintiles were used in this paper. Data was weighted based on criteria from FAO to represent each country population. We applied different statistical analyses to show the flexibility of the data. Descriptive analysis was used to highlight frequencies of each dependent, independent and covariate factors. Crosstabs analysis was carried out to explore the association between dependent, independent and covariate factors. Binary logistic regression analysis was undertaken to see which factors are strongly associated with FIES.  ***Regional Level Results***  Findings from our descriptive analysis showed a significant difference in FIES over the three-year period (2014-6). In the region as a whole, food security increased by approximately eight percent (8%) from 49.7% in 2014 to 57.1% in 2016. It should be noted that severe food insecurity incidences almost doubled (from 3.6% in 2014 to 6.1% in 2016). This state of worsening food insecurity coincided with declines in terms of social life index, with only forty-percent (40%) of respondents reported living in an excellent situation. Findings from our binary logistic regression analysis allowed us to identify characteristics of the food insecure in the region. According to our findings the probability of being food insecure increased among respondents who were female, with low education level, and unemployed. Additionally, people living in rural areas were more food insecure compared to urban areas (see background material for tables 1-5 and figure 1).  ***National Level Results***  We found a significant difference in FIES for three years (2014-6) in each of the five countries except Kyrgyzstan. In Armenia, Tajikistan and Kazakhstan these changes were of greatest significance. In Armenia after 2014 to 2016, mild food insecurity decreased significantly, while the severe and moderate food insecurity increased by almost double. In contrast, severe food insecurity in the nearby state of Uzbekistan remained relatively stable over the period, however, food security declined and mild food insecurity increased (see background material for table 6 and figures 2-6). |

**What are the elements needed for the practice to be institutionally, socially, economically and environmentally resilient and/or sustainable?** (approximately 500 words)

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| The Director of the McGill Institute of Global Food Security (IGFS), Professor Melgar-Quinonez played a key role in the development of FIES and currently sits on an FIES advisory group with the FAO. As a result of this longstanding collaboration with the FAO and through his engagement in the development of this tool, the McGill Institute for Global Food Security pays a major role in this initiative. The institute is home to the McGill Global Food security Data Lab, which is the host for data from the Voices of the Hungry collected in 150 countries.  Through this novel global initiative McGill researchers (both faculty members and graduate students) have hands-on-training to explore, partner and collaborate with researchers across the world on a wide range of research questions on food insecurity, contributing to a better understanding of a phenomenon that still affects hundreds of millions worldwide. As part of this partnership with the FAO, graduate students from the Institute can intern with the FAO, and work directly with the Voices of the Hungry project. FAO aims to incorporate FIES in the World Gallup Poll for 5 years (i.e. 2014-2018), with the goal of positioning this indicator as one of the main global measures to assess food insecurity. It is to expect that FIES will be introduced in food security information systems in all countries within the United Nations, and will be part of all sorts of national surveys on poverty, health and nutrition, demographics and health.  Through the FAO efforts to make the institutional knowledge of the FIES at McGill can be developed with colleagues from Central Asia through formal and informal knowledge exchanges. These activities would likely include internships, workshops and collaborations on food security research. |

**The impact of your example on national policies and people’s lives. What indicators have been used to measure it?** (approximately 400 words)

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| New measures are also needed to meet additional requirements related to enhancing stakeholder coordination, improving their responsiveness to crises through measurement tools that provide cost-effective, easily understood and shared information. While existing tools applied in various studies have described the negative effect of financial crises on food security (FAO, 2017; Kavallari, Fellmann and Gay, 2014), they provide snapshots rather than continuous assessments of food security status in countries affected by economic shocks (Brinkman et al., 2017; Headey, 2013; Nandy, Daoud and Gordon, 2016; Davis and Geiger, 2017). In an effort to fill this research gap, this paper featured the use of FIES through the Voice of the Hungry Project by the FAO as an accurate and easily understood tool, which can be used to coordinate stakeholders, measure changes in food insecurity in the short term and better understand the impact of economic shocks.  FIES through the VoH project allows us to look at the annual changes in food security status in Central Asia, from 2014 to 2017.  FIES provides a fine-tuned understanding of rapid changes in food insecurity in the Central Asia region, which is easily understood and can allow for direct welfare impacts to the vulnerable in an acceptable timeframe, and support more evidence-based policy making. In the period of 2014 to 2016, while some of the population became more food insecure, between 2014 and 2015, 20% became worse off as they shifted from experiencing “mild” to “severe” food insecurity. The mild category is associated with behaviors of worrying and suggests that respondents are forecasting potential threats due to current information. FIES allows us to not only look at regional trends but also how food security has changed over the 2014-2016 period at the national level in order to explain trends. Of the five countries, our findings suggest that Armenia, Tajikistan and Kazakhstan have seen the most significant changes in worsening food insecurity |

**Key lessons (positive and negative) that can be learned from your example and how gaps, obstacles and any other adverse conditions were addressed** (approximately 600 words)

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| While Central Asian countries have developed different agri-food domestic policies with differing outcomes and exposure to global food prices (Bobokhonov et al., 2017), our findings from the FIES assessment in Central Asia could be used and shared by stakeholders to develop more evidence-based analysis on food security. These findings will support national and regional capacity, besides knowledge infrastructure for more targeted interventions to enhanced food security and nutrition outcomes.   1. UN agencies such as the World Food Programme in collaboration with national governments of Central Asia have been working in the area of enhanced governance in the food security and nutrition (WFP, 2017). One of these areas that could benefit from the application and use of FIES the strengthening of social protection systems through school feeding programmes. If applied before and after an intervention, FIES can allow respondents to express their perception of the food security situation and would not only allow easy detection of changes in the severity of food insecurity, but also help to evaluate the effect of these programs. 2. These qualities of the FIES have resulted in Pérez-Escamilla (2012) suggesting that such experience-based tools possess SMART qualities. Such tools can be seen as 1). Specific (focused on experiences of food access), 2). Measurable (direct experiences can be measured), 3). Achievable (easily conducted), 4). Relevant (identify how individuals or households are coping) and, 5). Timely (rapidly applied and sensitive to change). And these qualities can inform food security governance in Central Asia by: 3. Providing guidance that allows for easy understanding of the issue, and allow joint participation of stakeholders in developing and implementing responses; 4. Developing of targets to ensure that actions taken by partnering institutions are effective, transparent, and accountable; 5. Supporting the rule of law, and resource allocation through service delivery that can be justified and makes best use of limited resources; and, 6. Sustaining relevant, and coordinated policies, and actions. |

**Sources and/ or additional background material** (please provide weblinks when possible or send the material to fsn-moderator@fao.org)

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| **Table 2.** Socio-Demographic Characteristics of Gallup World Poll in Central Asia Region 2014-6 | | |
|  |  | (%) |
|  |  |  |
| Sex | Female | 58.3 |
|  | **Male** | **41.7** |
| Age | 13-25 | 24.9 |
|  | 26-49 | 45.3 |
|  | 50-64 | 20.2 |
|  | **65-99** | **9.6** |
| Education | Completed elementary | 14.7 |
|  | Secondary-3-year Tertiary | 66.4 |
|  | **Four years of over high school** | **18.9** |
| Employment Status | Unemployed | 6.8 |
|  | Out of workforce | 40.4 |
|  | Employed part time | 16.6 |
|  | **Employed full time** | **36.2** |
| Income quintile | Poorest 20% | 16.7 |
|  | Second 20% | 17.9 |
|  | Middle 20% | 193 |
|  | Fourth 20% | 21.4 |
|  | **Richest 20%** | **24.8** |
| Area of residence | Rural | 71.2 |
|  | **Urban** | **28.8** |
|  |  |  |
| n= |  | (15,000) |
| **Source**: Micro-data analysis of the Gallup survey | | |

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| **Table1.** Food Insecurity Experience Scale in Central Asia 2014-6 | | | |
|  | 2014 | 2015 | 2016 |
| Severe FI | 3.6 | 4.8 | 6.1 |
| Moderate FI | 8.7 | 10.0 | 11.4 |
| Mild FI | 38.1 | 27.1 | 25.4 |
| Food secure | **49.7** | **58.1** | **57.1** |
| n= |  | (15,000) |  |
| **Source**: Micro-data analysis of the Gallup survey | | | |

\* FI=food insecurity

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| **Table 3.** Financial Life Index- Central Asia Region 2014-6 | | |
|  |  | (%) |
| Financial life index | Low | 20.6 |
|  | Moderate | 16.1 |
|  | Good | 21.8 |
|  | **Excellent** | **41.5** |
| n= |  | (15,000) |
| **Source**: Micro-data analysis of the Gallup survey | | |

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| **Table 4.** Crosstab Analysis between FIES and some independent Variables in the Central Asia Region, 2014-6 | | |
|  |  |  |
| Sex (0=F; 1=M) | Cramer’s V | 0.043\*\*\* |
| Age | Gamma | -0.130\*\*\* |
| Education | Gamma | **0.219\*\*\*** |
| Employment Status | Gamma | 0.139\*\*\* |
| Income quintile | Gamma | **0.234\*\*\*** |
| Area of residence (0=R; 1=R) | Cramer’s V | 0.020 |
| Financial life index | Gamma | 0.527\*\*\* |
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| n= |  | (15,000) |
| **Source**: Micro-data analysis of the Gallup survey | | |

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| **Table 5.** Logistic Regression Analysis of Food Insecurity Status and Independent Variables in Central Asia | | | | |
|  |  |  | 95% CI | |
|  |  | Odds ratio | Low | High |
|  |  |  |  |  |
| Gender | Female | **1.134\*\*** | 1.042 | 1.234 |
|  | Male (Ref) |  |  |  |
| Age | 13-25 | **0.662\*\*\*** | 0.568 | 0.772 |
|  | 26-49 | 0.881 | 0.763 | 1.016 |
|  | 50-64 | 0.868 | 0.745 | 1.010 |
|  | 65-99 (Ref) |  |  |  |
| Education | Completed elementary | **1.968\*\*\*** | 1.695 | 2.284 |
|  | Secondary-3-year Tertiary | 1.596\*\*\* | 1.409 | 1.746 |
|  | Four years of over high school (Ref) |  |  |  |
| Employment status | Unemployed | **1.701\*\*\*** | 1.422 | 2.036 |
|  | Out of workforce | 1.013\*\*\* | 0.916 | 1.121 |
|  | Employed part time | 1.414\*\*\* | 1.253 | 1.595 |
|  | Employed full time (Ref) |  |  |  |
| Area of residence | Rural | 1.053 | 0.959 | 1.155 |
|  | Urban |  |  |  |
| Income quintile | Poorest 20% | **1.685\*\*\*** | 1.470 | 1.930 |
|  | Second 20% | 1.329\*\*\* | 1.167 | 1.513 |
|  | Middle 20% | 1.254\*\*\* | 1.107 | 1.421 |
|  | Fourth 20% | 1.188\*\* | 1.053 | 1.340 |
|  | Richest 20% |  |  |  |
| Financial life index | Low | **8.141\*\*\*** | 7.244 | 9.149 |
|  | Moderate | 3.411\*\*\* | 3.030 | 3.839 |
|  | Good | 2.769\*\*\* | 2.479 | 3.093 |
|  | Excellent (Ref) |  |  |  |
| Chi-square significance: \*= p<0.05; \*\*= p<0.01; \*\*\*= p<0.001  **Source: S**elf-calculation of data from Gallup | | | | |

**National Level Analysis**

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| **Table 6**. FIES Across Five Countries in Central Asia | | | | | |  |
|  |  | **Severe FIS** | **Mod FIS** | **Mild FIS** | **Food Security** | **Level of sig** |
| **Kazakhstan** | **2014** | 0.7 | 5.8 | 27.5 | 66.0 | (P=0.000) |
|  | **2015** | 0.6 | 3.3 | 22.8 | 73.2 |  |
|  | **2016** | 2.8 | 4.1 | 16.4 | 76.8 |  |
|  |  |  |  |  |  |  |
| **Kyrgyzstan** | **2014** | 6.9 | 12.4 | 25.1 | 55.5 | (P=0.887) |
|  | **2015** | 7.2 | 12.6 | 28.7 | 51.4 |  |
|  | **2016** | 5.7 | 12.7 | 26.7 | 54.9 |  |
|  |  |  |  |  |  |  |
| **Tajikistan** | **2014** | 5.1 | 8.6 | 65.6 | 20.7 | (P=0.000) |
|  | **2015** | 3.4 | 10.6 | 17.9 | 68.1 |  |
|  | **2016** | 10.9 | 14.8 | 23.1 | 51.1 |  |
|  |  |  |  |  |  |  |
| **Uzbekistan** | **2014** | 2.3 | 5.6 | 22.7 | 69.4 | (P=0.017) |
|  | **2015** | 2.8 | 8.0 | 24.7 | 64.5 |  |
|  | **2016** | 1.9 | 6.5 | 27.7 | 63.9 |  |
|  |  |  |  |  |  |  |
| **Armenia** | **2014** | 4.1 | 9.1 | 47.5 | 39.2 | (P=0.000) |
|  | **2015** | 8.1 | 14.5 | 38.6 | 38.7 |  |
|  | **2016** | 9.7 | 18.6 | 32.4 | 39.3 |  |
|  |  |  |  |  |  |  |
| Source: Data analysis from Gallup from 2014-2016  Red one is not significant remaining countries are significant | | | | | |  |

ANNEX 1: Suitability of FIES to meet the requirements of the Central Asia context and support recommendations of the CFS.

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Local Issues** | **Recommendation** | **Requirements** | **Suitability of measures** | | | | |
| **Issues identified by agri-food stakeholders of Central Asia** | **Committee on World Food Security (CFS) endorsed Principles for Responsible Investment in Agriculture and Food Systems** | **Requirements of a measure/data** | **Calorie available**  **per capita** | **Household income & expend-**  **iture** | **Dietary intake** | **Anthro-pometry** | **Experience-based scales** |
| Need to understand problem, identify themes and take informed action | Principle 2 action needed to support the implementation of policies and actions, promoting greater coordination, cooperation, and partnerships to support livelihoods | Easily understood by a multiplicity of stakeholders to understand the problem, improve targeting, coordination | No | No | No | No | Yes |
| Outdated scientific and technological  achievements |  | Does not require scientific and technological specialist-level skills | Yes | Yes | No | No | Yes |
| Reduce the distance between science and policy | Principle 10 (i) assess and address impacts and promote accountability | Able to support evidence-based action and monitoring using indicators | No | Yes | Yes | Yes | Yes |
| Build an improved information network for knowledge sharing | Principle 8 V. sharing of information features by enhancing awareness, knowledge, and communication around evidence-based information. | Cost-effective, easily understood and shared | No | No | Yes | No | Yes |
| (ii) Defining baseline data and indicators for monitoring and to measure impacts |

(World Bank, 2016); (<http://www.fao.org/3/a-au866e.pdf>); (Ballard, Kepple, and Cafiero, 2013).