PP5027 Food Security
Lee Kuan Yew School of Public Policy
AY 2020/21 Sem 2
(Last updated January 22, 2021)

Faculty: Assistant Prof. Sonia Akter
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Tel: 66013972

Date: February 5, 2020
Time: 8:30am–8:00pm
Venue: LKY SR 3−1
Consultation Hours: by appointment

Module Description

This module is part of a series of four 1-MC modules on *Global Food Policy and Sustainable Food System*. Each module is offered in an intensive format for both PET and CET students.

PP5027 Food Security

This module provides a basic understanding of the concept and measurement of food security and its connection to sustainable agriculture. Key issues to be addressed include the definitions and dimensions of food security and the measurement of various food security indicators across global, national, and household level. The module gives an overview of the trends, current status and future projections of food security in developed and developing countries. It also discusses the relationship between food security and a sustainable agriculture; major threats to food security and the nature and sources of vulnerability to chronic and seasonal food insecurity across gender, race, ethnicity, age, occupation and poverty.

Learning Outcomes

Upon completion of this course, students will be able to (1) diagnose and analyze the trend, status and nature of food security; (2) compare, contrast and synergize various dimensions, indicators and measurement tools of food security; (3) assess vulnerability to food insecurity by different socio-demographic and occupational groups; (4) analyze the key threats to food security and a sustainable agriculture.

Assessment and Grading Criteria

Components	Weights
Class participation	20%
Group presentations	20%
Quiz	20%
Assignment	40%

Teaching Modes

A combination of lecture, guest lecture, group discussion and student presentations will be used.

Topics and Readings

Please note that this outline may be subject to change to adapt to students' needs along the way.

Pre-reading	1. Pérez-Escamilla, R., Gubert, M. B., Rogers, B., & Hromi-Fiedler, A. (2017). Food security measurement and governance: Assessment of the usefulness of diverse food insecurity indicators for policy makers. *Global Food Security*, *14*, 96-104. 2. Pre-reading slide deck (available in LumiNUS) 3. Berry, E. M., Dernini, S., Burlingame, B., Meybeck, A., & Conforti, P. (2015). Food security and sustainability: can one exist without the other?. *Public health nutrition*, *18*(13), 2293-2302. 4. Trendy foods: Salmon and avocados | DW Documentary https://www.youtube.com/watch?v=mcYr040cLNc
Notes for class discussion	Prepare ***an example*** (can be bullet points on a ppt slide) on "Threats to Sustainable Agriculture". Use the documentary in your pre-reading list as a point of reference. Your example should (1) be specific to a country or region; (2) be about a clearly and narrowly defined practice or activity (e.g. excessive use of pesticide or water extraction, soil degradation, water pollution, deforestation); (3) provide details on how this practice is posing threat to sustainability; (4) identify the population groups that are most adversely impacted by this issue. You will be invited to share/discuss your example during the class.
	February 5, 2021
8:30am−9:00am	Ice Breaker, Welcome, and Introduction
9:00am−9:30am	**Quiz**
Topics covered	Pre-reading materials 1, 2 & 3
9:30am−10:30am	**An Overview of Global Food Security**
Topics covered	• A general discussion on food security measurement • Food security and global governance • Food security and sustainability • Sustainable Development Goals #2: Zero Hunger
10:30am−10:45am	Break
10:45am−12:00pm	**An Overview of Global Food Security and its Determinants**
Topics covered	• Status, trend and geographical distribution of global hunger • Socio-economic determinants of food insecurity
Required reading	1. FAO, IFAD, UNICEF, WFP and WHO. 2020. The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets. Rome, FAO. https://doi.org/10.4060/ca9692en

12:00am−1:00pm	**Lunch Break**
1:00pm−3:00pm	**Food Security & Sustainable Agriculture**
Topics covered	• Changes in consumption and production practices • Large-scale agricultural investments • Climate change • Water scarcity • Discussion by students
Required reading	1. Hufe, P. & Heuermann, D. F. (2017). The local impacts of large-scale land acquisitions: a review of case study evidence from Sub-Saharan Africa. *Journal of Contemporary African Studies*, 35(2), 168-189. 2. Myers, S. S., Smith, M. R., Guth, S., Golden, C. D., Vaitla, B., Mueller, N. D., ... & Huybers, P. (2017). Climate change and global food systems: potential impacts on food security and undernutrition. *Annual Review of Public Health*, 38.
3:00pm−4:00pm	**Guest Lecture on Food Security & Sustainable Agriculture** Dr. Takashi Yamano Economist Economic Research and Regional Cooperation, Economic Analysis and Operation Support, Asian Development Bank (ADB)
4:00pm−6:00pm	Group presentation preparations
6:00pm−7:30pm	Presentation, discussion and Q&A
7:30pm−8:00pm	Wrap up

Assignment due on February 7, 2021, 11:59pm

NOTE - LKY SPP PLAGIARISM WARNING FOR CLASS ASSIGNMENTS

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PP5028 Food System Resilience
Lee Kuan Yew School of Public Policy
AY 2020/21 Sem 2
(last updated 1 February 2021)

Faculty: Assistant Prof. Sonia Akter
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Date: February 19, 2020
Time: 8:30am–8:00pm
Venue: LKY SR 3−1
Consultation Hours: by appointment

Module Description

This module is part of a series of four 1-MC modules on *Global Food Policy and Sustainable Food System*. Each module is offered in an intensive format for both PET and CET students.

PP5028 Food System Resilience

This module provides a detailed understanding of the various components of a food system, its resilience and its interlinkage with food security. The purpose of this module is to familiarize students with the components of a food system and equip them with tools to identify, prevent and mitigate shocks to the system. Food system resilience during an external shock such as a natural disaster or a pandemic will receive special focus in this module. Government sponsored food and nutrition assistance programs and their effectiveness will be discussed at length by drawing on case studies from both developed and developing countries. Global food insecurity during the COVID-19 pandemic and government response strategies to mitigate the adverse impacts of the shock will be critically assessed.

Learning Outcomes

Upon completion of this course, students will be able to (1) assess a food system's resilience to external shocks; (2) identify an appropriate set of policy interventions to enhance food system resilience; (3) critically evaluate government measures designed to protect the vulnerable population against food insecurity during a crisis; (4) identify the strengths and weaknesses of public programs on food and nutritional security.

Assessment and Grading Criteria

Components	Weights
Class participation	20%
Group presentations	20%
Quiz	20%
Case study	40%

Teaching Modes

A combination of lecture, guest lecture, group discussion, case study and student presentations will be used.

Topics and Readings

Please note that this outline may be subject to change to adapt to students' needs along the way.

Pre-reading	1. Tendall, D. M., Joerin, J., Kopainsky, B., Edwards, P., Shreck, A., Le, Q. B., ... & Six, J. (2015). Food system resilience: defining the concept. *Global Food Security*, *6*, 17-23.
February 19, 2021	
8:30am−9:00am	**Quiz**
Topics covered	Pre-reading material 1
9:00am−10:30am	**Building Food System Resilience**
Topics covered	• Food system resilience and food security • Resilience and efficiency – Is there a trade-off? • Measuring food system resilience
Required reading	1. Kaseva, J., Himanen, S. J., & Kahiluoto, H. (2019). Managing diversity for food system resilience. In *Advances in Food Security and Sustainability* (Vol. 4, pp. 1-32). Elsevier.
10:30am−10:45am	**Break**
10:45am−12:00pm	**Common Shocks to a Food System**
Topics covered	• Natural disasters, violent conflicts, financial crisis, pandemic • Major challenges and lessons learned from global crisis: 2007/8 food price crisis; Covid-19 pandemic
Required reading	1. Bryan, S. (2013). A cacophony of policy responses: Evidence from fourteen countries during the 2007/08 food price crisis (No. 2013/029). WIDER Working Paper. 2. Mengoub, F. E. (2020). Ensuring Food Security During the COVID-19 Pandemic: Review of Short-term Responses in Selected Countries. https://www.africaportal.org/documents/20242/Ensuring_food_security_during_the_COVID-19_pandemic.pdf
12:00am−1:00pm	**Lunch Break**
1:00pm−2:30pm	**Food and Nutrition Assistance Programs in Developed and Developing Countries**
Topics covered	• Targeted Public Distribution System (TPDS) of India • Programa de apoyo alimentario of Mexico
Required reading	1. Pingali, P., Aiyar, A., Abraham, M., & Rahman, A. (2019). Reimagining safety net programs. In Transforming food systems for a rising India (pp. 135-164). Palgrave Macmillan, Cham.

2. Scott, J., & Hernández, C. (Eds.). (2017). From Food Subsidies to Targeted Transfers in Mexico. https://doi.org/10.1596/978-1-4648-1087-9_ch5

2:30pm−4:00pm	**Food System Resilience during the COVID-19 Pandemic: Selected Case Studies**
4:00pm−6:00pm	Group presentation preparations
6:00pm−7:30pm	Presentation, discussion and Q&A
7:30pm−8:00pm	Wrap up

Assignment due on February 22, 2020, 11:59pm

NOTE - LKY SPP PLAGIARISM WARNING FOR CLASS ASSIGNMENTS

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PP5029 Agricultural Economics and Policy
Lee Kuan Yew School of Public Policy
AY 2020/21 Sem 2
(Updated on 25 February 2021)

Faculty: Assistant Prof. Sonia Akter
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Date: March 5, 2020
Time: 8:30am–8:00pm
Venue: LKY SR 3−1
Consultation Hours: by appointment

Module Description

This module is part of a series of four 1-MC modules on *Global Food Policy and Sustainable Food System*. Each module is offered in an intensive format for both PET and CET students.

PP5029 Agricultural Economics and Policy

The purpose of this module is to introduce students to the use of economic tools and concepts in the analysis and evaluation of public policies and expenditures affecting food production, consumption, innovation, technology adoption and domestic and international trade and natural resource use and environmental degradation. The module will critically assess the impacts of commonly used food and agricultural policy tools, such as trade restrictions, price control, price subsidy, agricultural credit, quota etc. and agricultural technology such as genetically modified crops on producers, agribusinesses, consumers, and the environment. These concepts and issues will be illustrated with case studies from both developed and developing countries.

Learning Outcomes

Upon completion of this course, students will be able to (1) list and explain different policy tools, their theoretical rationale and applications; (2) identify an appropriate policy mix to address challenges in food production, consumption and distribution; (3) assess the distributional consequences of public policies on food producers, consumers, traders and trade partners; (4) assess the impact of agricultural and food policies on resource use and the environment.

Assessment and Grading Criteria

Components	Weights
Class participation	20%
Group presentations	20%
Quiz	20%
Assignment	40%

Teaching Modes

A combination of lecture, guest lecture group discussion, case study and student presentations will be used.

Topics and Readings

Please note that this outline may be subject to change to adapt to students' needs along the way.

Pre-reading	1. Pre-reading lecture slides 2. N. Gregory Mankiw (2018) Principles of Economics, 8th Edition, Cengage Learning. Chapter 6, 8 & 10.
March 5, 2021	
8:30am−9:00am	**Quiz**
Topics covered	Pre-reading materials 1 and 2
9:00am−10:30am	**Common agricultural policy tools and their applications (1)**
Topics covered	• Agricultural support programs
10:30am−10:45am	**Break**
10:45am−12:00pm	**Common agricultural policy tools and their applications (2)**
Topics covered	• Agricultural support programs
12:00am−1:00pm	**Lunch Break**
1:00pm−2:30pm	**International agricultural trade and food security**
Topics covered	• Non-tariff measures or barriers to trade • Agricultural dumping • Trade war
Required reading	1. Santeramo, F. G., & Lamonaca, E. (2020). The role of non-tariff measures in the agri-food sector: positive or negative instruments for trade?. In Positive Integration-EU and WTO Approaches Towards the" Trade and" Debate (pp. 35-59). Springer, Cham.
2:30pm−2:45pm	**Break**
2:45pm−3:00pm	**Agricultural biotechnology regulation (Introduction)**
3:00pm−4:00pm	Guest lecture on 'Genetically modified crops and their role for food security' Guest lecturer: Prof. Dr. Matin Qaim Department of Agricultural Economics and Rural Development University of Goettingen, Germany https://www.uni-goettingen.de/en/prof.+dr.+matin+qaim/73908.html
Required reading	1. Qaim, M. (2020). Role of new plant breeding technologies for food security and sustainable agricultural development. Applied Economic Perspectives and Policy, 42(2), 129-150.
4:00pm−6:00pm	Group presentation preparations

6:00pm−7:30pm	Presentation, discussion and Q&A
7:30pm−8:00pm	Wrap up
Assignment due on March 8, 2021, 11:59pm	

NOTE - LKY SPP PLAGIARISM WARNING FOR CLASS ASSIGNMENTS

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PP5030 Sustainable Urban Food System
Lee Kuan Yew School of Public Policy
AY 2020/21 Sem 2
(Last updated March 2, 2021)

Faculty: Assistant Prof. Sonia Akter
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Tel: 66013972

Date: March 12, 2020
Time: 8:30am–8:00pm
Venue: LKY SR 3−1
Consultation Hours: by appointment

Module Description

This module is part of a series of four 1-MC modules on *Global Food Policy and Sustainable Food System*. Each module is offered in an intensive format for both PET and CET students.

PP5030 Sustainable Urban Food System

This module will discuss concepts, theories, policy issues and best practices on sustainable urban food system management in mega cities. It will address policy challenges that are specific to urban food systems in highly urbanized cities of Asia, e.g., Hong Kong, Mumbai, Dhaka, Jakarta. The module provides a platform for interdisciplinary debate and discussion on how urban food system can be made more sustainable in a realistic and cost-effective way. Topics will cover the problems and prospects of urban agriculture (e.g., community gardens, vertical farming) in enhancing food security and food system resilience, reducing food waste, changing consumption pattern of urban consumers and associated health risks and technology for sustainable urban food ecosystem in Asia.

Learning Outcomes

Upon completion of this course, students will be able to (1) diagnose and analyze the stress points of an urban food system; (2) compare, contrast and synergize various policy frameworks to achieve and maintain a sustainable urban food system; (3) identify areas where food waste could be minimized; (4) assess the trends of food consumption pattern and identify economic tools to change consumption behaviour; (5) identify technological options to build a sustainable food ecosystem.

Assessment and Grading Criteria

	Weights
Class participation	20%
Group presentation	20%
Quiz	20%
Assignment	40%

Teaching Modes

A combination of lecture, guest lecture, group discussion and student presentations will be used.

Topics and Readings

Please note that this outline may be subject to change to adapt to students' needs along the way.

Pre-reading	1. Wiskerke, J. S. (2015). Urban food systems. Cities and Agriculture: Developing Resilient Urban Food Systems, 1-25. url: https://www.researchgate.net/profile/Han-Wiskerke/publication/293593530_Urban_food_systems/links/58c073054585156790240532/Urban-food-systems.pdf 2. Pre-reading lecture slides
March 12, 2021	
8:30am−9:00am	**Quiz**
Topics covered	Pre-reading materials 1 and 2
9:00am−10:30am	**Key issues for urban food security**
Topics covered	• The causes of urban hunger and malnutrition • Food dessert and urban planning • Key entry points for intervention
10:30am−10:45am	**Break**
10:45am−12:00pm	**Urban agriculture and sustainable urban food system**
Topics covered	• Trends, challenges and opportunities of urban agriculture • Vertical firming • Smart food city: Concept and practice
Required reading	1. Armanda, D. T., Guinée, J. B., & Tukker, A. (2019). The second green revolution: Innovative urban agriculture's contribution to food security and sustainability–A review. Global Food Security, 22, 13-24.
12:00am−1:00pm	**Lunch Break**
1:00pm−2:30pm	**Technological options for building a sustainable urban food system**
Topics covered	• The framework of circular economy and food waste management in megacities • Cellular Agriculture, lab-grown meat, and 3D printed food
Required reading	1. Vilariño, M. V., Franco, C., & Quarrington, C. (2017). Food loss and waste reduction as an integral part of a circular economy. Frontiers in environmental science, 5, 21.
2:45pm−3:00pm	**Break**

3:00pm−4:00pm	**Guest Lecture** Speaker: Mr. Melvin Chow Senior Director, Food Supply Resilience Division & Food Infrastructure and Management Division Singapore Food Agency
4:00pm−6:00pm	Group presentation preparations
6:00pm−7:30pm	Presentation, discussion and Q&A
7:30pm−8:00pm	Wrap up

Assignment due on March 15, 2021, 11:59pm

NOTE - LKY SPP PLAGIARISM WARNING FOR CLASS ASSIGNMENTS

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