

Food and Nutrition Security

Chapter Template

A proposition from the Committee

September 2016

Core Topics

- **Abstract**
- **I. National Characteristics**
- **II. Institutional Setting**
- **III. Resource and Ecosystem Characteristics**
- **IV. Technology and Innovation**
- **V. Increasing Efficiency of Food Systems**
- **VI. Health Considerations**
- **VII. Policy Considerations**
- **VIII. Summary**

I. National Characteristics

- Country physical size, arable land inventory, landscape and environmental heterogeneity
- Demographic characteristics and future trends
- Fraction of population suffering from food and nutrition insecurity and the FNS trajectory, (i.e., is the food insecure population increasing or decreasing)
- Agricultural modes – e.g. predominantly industrial, plantation systems, peasant agriculture.
 - Important plant crops
 - Animal agriculture
- Is the country self-sufficient in agriculture?
- Major export / import crops and markets
- Potential sources of FNS instability (e.g. climate change, trade disruptions, geo hazards, etc.)
- Major agricultural challenges

II. Institutional Setting

- National agricultural research systems
 - Are research capabilities in need of further development?
 - Areas of local strength.
 - Networks of scientific collaboration inside and outside country
 - Access to and maintenance of data bases tracking agricultural systems
- Universities and research institutes
 - Scientific development and infrastructure
 - Capabilities in inter- and transdisciplinary research, modeling, assimilating technological innovations
- Skilled work force development and the status of national education systems
- Relative contributions from public and private sectors
- Future outlook

III. Resource and Ecosystem Characteristics

- Water resources and challenges over the next fifty years
- Soil resources and challenges over the next fifty years
- Energy challenges
- Biodiversity conflicts and challenges
 - Problems associated with over-exploitation
 - Depletion of genetic diversity
- Implications of forestry trends.
- Potential impacts of climate change
- Building resilience to extreme events
- Future outlook

IV. Technology and Innovation

- Role of biotechnology
 - Plant agriculture
 - Animal agriculture
 - Pests and diseases
- Prospects for novel agricultural products
- Opportunities for and obstacles to new management technologies (e.g. in irrigation and water management or fertilizers)
- Development of aquaculture/marine resources

V. Increasing Efficiency of Food Systems

- Prospects for technology based increases in agricultural production
- Infrastructure needs (e.g. transportation systems)
- Issues for food utilization and minimizing waste
- Conflicts, if any, between food production and production of energy and fiber

VI. Health Considerations

- Food borne diseases
- Over consumption
- Expected changes in consumption patterns (and implications for food importation)
- Understanding and incentivizing behavioral change, emerging personalized nutrition



VII. Policy Considerations

- Distortions created by subsidies and other outmoded agricultural policies
- Promoting nutrition-sensitive agriculture to provide healthy and sustainable diets with associated issues for resource use and food prices
- Policies that foster technological innovation
- Policies that build human resources (e.g. education, gender, equity).
- Policies that seek to redesign the agricultural ecology (land use, bioeconomy, etc.)
- Policies to promote consumption of healthy food
- Comparative advantages of your country in agriculture
- International trade issues
- Market challenges

VIII. Summary

- Some potential national scenarios for agricultural production over next fifty years
- Highest priority actions to achieve agricultural sustainability

Thanks



Mexico City
September 17-20
2016

