

# Food security in a world of changing environments and human actions

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March 30, 2012



# Nutrition in the ascent

Milestone	Year
Vitamin A reduces child mortality	1988
UNICEF conceptual model	1990
Malnutrition, infection, and child mortality	1993
Global burden of disease	1996
Lancet child survival series	2003
WHO Global Strategy on Diet, PA, and Health	2004
Copenhagen consensus of economists	2006, 2008
World Bank repositioning statement	2006
Lancet child development series	2007
Lancet nutrition series	2008
UN Scaling Up Nutrition, US State Dept 1000 Days	2010

# Concurrence on priorities

- Focus on 1000 days: conception to 24 mo
- Advance agenda through building
  - Consensus (through sociopolitical processes)
  - Capacity (to make strategic policy decisions and implement them)
  - Commitment\* (through enhancing and supporting motivation)
- Implement and deliver effective actions
- Have nations and sub-nations take lead

\*“The will to act and keep on acting until the job is done.”  
(Heaver, World Bank, 2005)

# Advancing agenda

- Thinking and acting holistically
- Developing alliances
- Build stable, politically and administratively sustainable agenda
- Build recognition that nutrition both influences-and is influenced by--human, social, and economic development

# Environmental influences and human agency

- Many influencing factors
- Influence through complex interplay of factors
- Influence of factors is not deterministic
  - Depends on human behavior
  - Depends on context
  - Cross-sector and synergistic effects matter
- Human behavior hard to change, but...
  - Small changes to factors can nudge behavior
  - Small changes can cascade to have large effects in population

# What is changing?

- Global climate
- Globalization of trade and disease
- Energy availability and prices
- Demographics, location, and constructed environments
- Agriculture
- Food and health systems
- Communications technology
- Poverty and inequity
- Decentralization
- Valuing of public welfare

# Changes to natural and constructed physical environments

- Climate change
  - Agriculture (food availability)
  - Livelihoods (food access and resource generation)
  - Direct health impacts
- Constructed environments
  - Urbanization
  - Transportation
  - Disrupted social networks
- Food systems

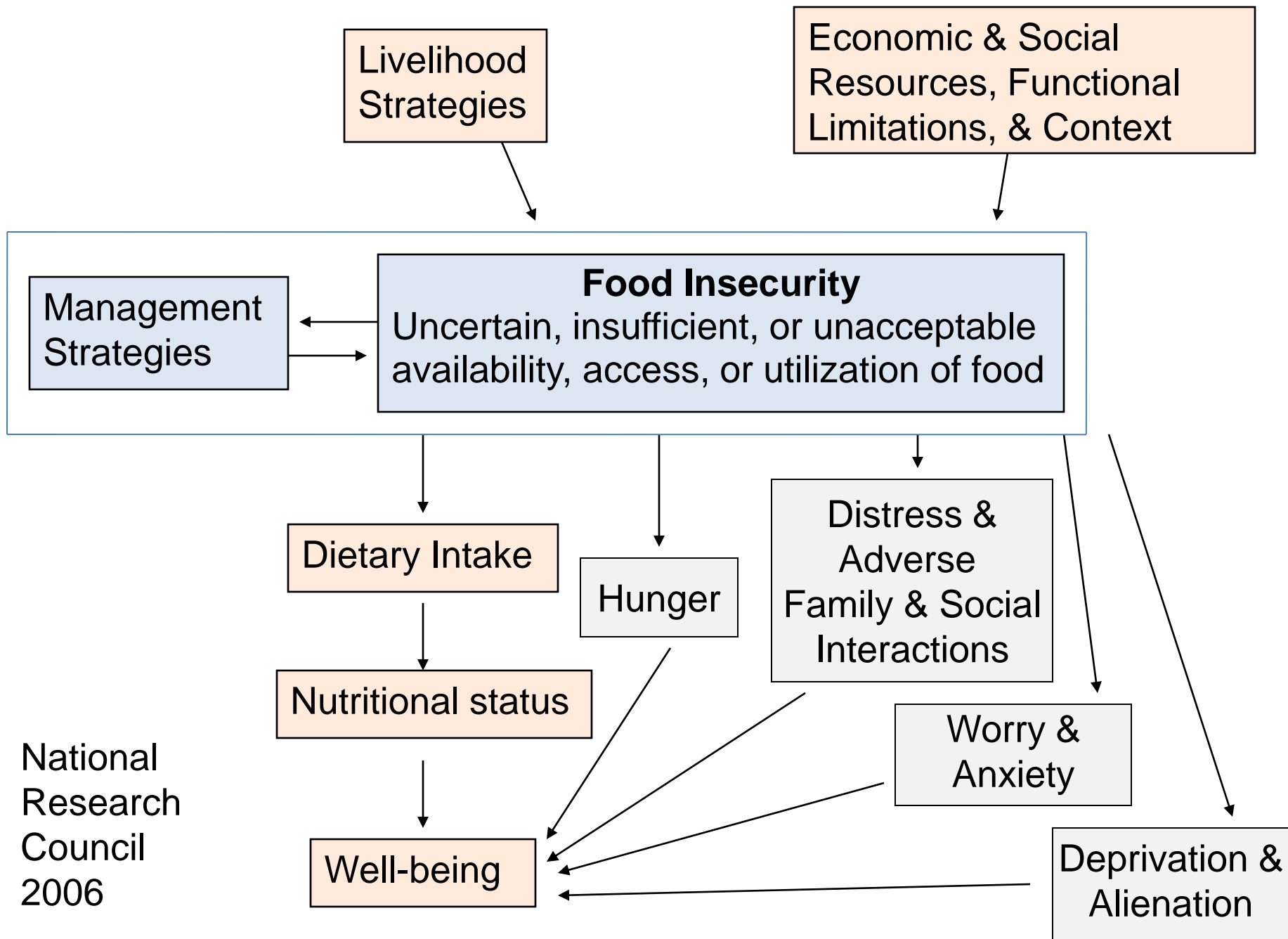
# Opportunities and challenges

- Opportunities for alliance building
  - Global climate change
  - Energy
  - Global, regional, and local health initiatives
  - Food systems (including the private sector)
  - Health systems strengthening
- Prioritizing goals in face of trade-offs
- Shaping perspectives and interests
  - Myths (i.e., shared beliefs) and identifications
  - Demands and expectations



# Trade-offs for families

- Among goals for children
  - Security, certainty, and safety
  - Nutrition and health
  - Education and emotional and social development
  - Family cohesion
  - Belonging and acceptance
- Food-insecure families have limited choices
- Myths about roles shaped by powerful forces  
(e.g., > \$4B annually in advertising by fast-food industry to children)



National  
Research  
Council  
2006

# Children in households that are food-insecure fare poorly in multiple domains

- Behavior and mental health
- Social
- Academic
- Developmental trajectories
- Hospitalizations
- Obesity

National Research Council 2006; Alaimo, Olson & Frongillo 2001, 2002; Slack & Yoo 2005; Jyoti, Frongillo & Jones 2005; Cook et al. 2006

# Differences among family members in experience of food insecurity

- Children have own unique experiences
  - Awareness (cognitive, emotional, physical)
  - Responsibility (participation, initiative, resource generation)
- Parents are not always aware of children's experiences
  - Lack of communication
  - Efforts to protect each other
- Questionnaire reports from parents and children do not agree
- Men, women, and children have different roles and experiences

# Food assistance programs

- Expression of intent of SNAP
  - Original: “eligible households...shall be provided with an opportunity more nearly to obtain a nutritionally adequate diet”
  - Current: alleviate food insecurity
- Food security and diet are means to outcomes, and we are concerned about outcomes
- Food insecurity is powerful integrative indicator of outcomes

# Leveraging agriculture for improving nutrition and health

- “I urge you to use your time together to find ways for all of us to do even more:
  - more to improve agricultural productivity,
  - more to connect farmers to markets,
  - more to increase access to nutritious crops and health care, and
  - more to support the women who are growing food and caring for children around the world.”

Hillary Rodham Clinton, Secretary of State, US

# Leveraging agriculture for improving nutrition and health

- “We’re not headed to a good place. We’re in a situation where food systems are not working. We’ve got nearly a billion hungry now, and we’ve got to prepare for feeding 9 billion by 2050.
- We’re in a situation where smallholders farmers have not got secure livelihoods, are at risk due to climate change, and....we may well be entering into another serious period because of rising food prices and food price volatility.
- We’ve got a lot of action underway. . . . But to take the links between agriculture, nutrition, and health to scale, we have to do a lot more.”

David Nabarro, United Nations

# Leveraging agriculture for improving nutrition and health

- “We desperately need another revolution, one that deals with agricultural productivity for the smallholders. . . . We need to answer these questions:
  - Are we growing the right foods?
  - Are we growing them in the most efficient way with respect to inputs, water, and land?
  - Are we growing them in the most sustainable way?
  - And what foods are consumers actually eating in terms of quality and quantity, nutrition, and food safety?”

Inger Andersen, World Bank and CGIAR Fund Council





- **Rural households**
- **Rely on home-produced food**
- **Food insecurity strongly seasonal (high in June-Sept)**
- **Unfertile soils**
- **Low rainfall (500 mm)**
- **Persistent food deficits**













