Food and Nutrition Policy
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Policy Principles, Definitions and Frameworks

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Goals of the FNP Course

• **Identify food and nutrition problems** amenable to policy intervention

• **Define criteria** of effective food or nutrition policies

• **Critique** a specific food and/or nutrition policy with respect to its evidence-base, adequacy of implementation, nutritional impact and forces which hinder or help the implementation of the specific policy
• Distribution of nutritional status as measured in population
• Distribution of normally nourished individuals
• Malnourished groups (under- and over-nourished)
Policy: A statement by an authoritative body of an intent to act in order to maintain or alter a condition in society

- **Statement**: clear, translatable, evidence-based
- **Authoritative body**: government or United Nations agency
- **Intent**: backed by legislative & regulatory components
- **Act**: inform, guide, intervene in an “enabling” economic, infrastructural, social and political environment
- **Alter**: Improve, or worsen (depends on target groups and constituencies)
- **Condition**: trade, security, education, transport; or in this course – one or more health, nutritional or dietary states
- **Society**: Defined in terms of “strata” (eg, by SES, age, gender, occupation, ethnicity, location) who stand to be unaffected/left out, gain or lose from a policy
Broad Goal of Food-and-Nutrition Policies

Food and nutrition policies are concerned with physical and economic access to food that is safe, nutritious, affordable, wholesome and culturally appropriate in adequate amounts and kind throughout the year that can prevent hunger and promote and sustain health, function and livelihood of an entire population at all stages of life.

Partly adapted from Draper and Dowler, Encyclopedia of Human Nutrition, 1998
Beyond biomedical concerns, food and nutrition policies should seek to enhance a social, economic and food industry infrastructure that allows populations to make healthy decisions about foods to eat under environmentally sustainable conditions.

Adapted from M Caraher and J Coveny, Public Health Nutrition 2004;7(5):591-598
Nutrition Policies in Low Income/Developing Countries

- Direct nutrient-based interventions
  - Nutrient supplementation
  - Food fortification
    - Commercial foods (including labeling)
    - Food aid
- Nutrition education to guide high risk group behavior (e.g., model of WHO/FAO/UNICEF)
  - Exclusive breast feeding ≤ 6 mo of age
  - Dietary guidelines for healthy eating
- Agricultural and trade policies that assure availability and access to nutritious food
Major Nutritional Problems that Require Policy Attention

- **Undernutrition**: chronic with acute components
- **Micronutrient deficiencies**: chronic with acute stages
- **Obesity**: chronic
- **Food insecurity**: chronic, fluxes
Reasons for Policies to Control/Prevent Undernutrition

- Reduce burden of infection
- Lower excess mortality
- Enable increased child activity
- Improve development
- Improve school performance

ACC/SCN, 1991
Root Causes of Undernutrition

- Poverty
- Deprivation
- Social inequality
- Lack of education
- Population growth

ICN, Rome, 1992
Consequences of Undernutrition
- Disease, disability, and death

UNDERNUTRITION
- Inadequate dietary intake
- Disease

Inadequate Access to Food
- Inadequate care for mothers and children
- Inadequate health services and unhealthy environment

Inadequate Education

Resources and Control
- Human, economic, and organizational

Political and Ideological System
- Economy

Potential Resources

Basic Causes

Immediate Causes

Underlying Causes

Manifestations

Clinical treatment protocols
- (eg, PEM, keratomalacia, diarrhea)

Supplementary feeding

Nutrition surveillance & surveys

Direct nutrient provision
- Supplementation
- Food fortification

Feeding programs

Nutrition education

Food subsidies

Horticulture (gardens)

Pisciculture (fish farms)

Animal husbandry

Education

Equal opportunity

Health care system

Market access

Food aid

Good governance

Economic & development plans

Grains & livestock production

Trade policies

Human rights (including food & nutrition)
Nutrition Policies to Correct Childhood Undernutrition May Have Limited “Window of Effect”

Irreversibility of Child Growth Failure
Ages 6-18 Months

Adapted by CTLT from UN SCN 5th Report on World Nutrition Situation 2004
Micronutrient Deficiencies: Policy Targets

Hidden Hunger

- ~2 billion people affected
- VA, iron, iodine, and zinc deficiencies
- Effects: poor growth, increased morbidity, intellectual impairment, increased mortality
- Preventable: supplements, fortification, diet change
Xerophthalmia due to vitamin A deficiency

Goiter due to iodine deficiency

Early childhood stunting due to chronic protein energy undernutrition

Courtesy of Al Sommer

Courtesy of John Dunn
Obesity as a Major Public Health Problem & Policy Target

Courtesy of Benjamin Caballero
Overweight trends in the United States among infants and children

Dewey KG, J Human Lactation 2003
Health Consequences of Obesity

- Cardiovascular disease
- Hypertensive disorders
- Diabetes
- Impaired quality of life
- Premature death
Food Insecurity

- Policy Goal: Assure that all people at all times have both physical and economic access to sufficient food to meet their dietary needs in order to lead a healthy and productive life.” (USAID, 1995)

Quantity and Quality, Availability, Access and Utilization
Basic Premises (some)

- Nutrition problems affect health & quality of life
- The problems can be sufficiently identified and quantified so as to deal with them
- Food policies directly affect nutrition, but often fail to explicitly integrate nutrition priorities
- Nutrition priorities need to be on the national policy agenda to safeguard citizenry
- Food & nutrition policies when implemented can safely improve nutrition in populations
- Political, economic and social commitments can be harnessed to devise policies, and implement and sustain programs
| **What** is the nutritional condition and how severe is it? |
| **Who** has it? (at-risk) |
| **Where** is the problem of public health importance? |
| **When** does it occur? |
| **Why** does it occur? |
### Defining the Problem: What?

What is the nutritional condition and how severe is it?

<table>
<thead>
<tr>
<th>Condition</th>
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<tbody>
<tr>
<td>Famine</td>
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<tr>
<td>Undernutrition (UN)</td>
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<tr>
<td>Micronutrient deficiency (MND)</td>
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<tr>
<td>“Hunger” (H)</td>
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<tr>
<td>Food insecurity (FI)</td>
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<tr>
<td>Poor child growth (PCG)</td>
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<tr>
<td>Dietary imbalance (DI)</td>
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<tr>
<td>Overweight (Ow)</td>
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<tr>
<td>Obesity (O)</td>
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</tbody>
</table>
Defining the Problem: What?

What is the nutritional condition and how severe is it?

• How is it measured?
  • Status?
  • Diet?
  • Food availability or access?
  • Other evidence?
• How severe?
  • Cutoffs?

Severity: % < indicator cutoffs…

• Famine: weather, crop prod, market prices, popn movements, FEWS
• UN: wt for ht, wt for age
• MD: serum level, enzyme activity, clinical signs
• H/FI: meal demands met
• PCG: mean tracking < 5%ile
• DI: RDAs, nutrient densities
• Ow/O: BMI, body composition
Defining the Problem: **Who?**

Who has the condition?
- High risk or target groups? Defined by...
  - Age/lifestage
  - Sex
  - Ethnicity/tribe/race/nationality
  - SES criteria
  - Occupational group

- Preschool children
- School aged children
- Adolescents
- Pregnant women
- Lactating women
- Fetus/infants
- Older age groups
Male
1-year old
boy in
Bangladesh

His
Twin
sister

Keith West
### Defining the Problem: Who?

**Who has the condition?**

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<table>
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<tr>
<th>Specific Groups</th>
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<tbody>
<tr>
<td>Native Americans</td>
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<tr>
<td>Karen tribe (Thailand)</td>
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<tr>
<td>Aboriginals (Australia)</td>
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<tr>
<td>Manangis (Nepal)</td>
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<tr>
<td>Harijans (S Asia)</td>
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<td>Immigrant groups</td>
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Defining the Problem: Who?

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  - SES criteria
  - Occupational group

- Groups below “poverty line” (UK, USA)
- “Food insecure” groups
- Tea estate, garment workers (S Asia)
- Food for work beneficiaries
- Migrant workers/families
- Day laborers
- Unemployed
“Who” may also be segments of populations in certain high risk “life stages” for policies to effectively address; eg, women of reproductive age in poor countries.
Where does the nutritional condition occur? Does it **cluster** by location?

- Region?
- Altitude?
- Development level?
- Rural vs urban?

<table>
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<tr>
<th>Far West Hills of Nepal - chronic food shortage</th>
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<tbody>
<tr>
<td>Central/north Ghana and NE Brazil where VA deficiency exists</td>
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<tr>
<td>Ecuador highlands with iodine deficiency</td>
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<td>Inner cities, Native American reservations &amp; Micronesia are at high risk for obesity</td>
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Defining the Problem: When?

When is the condition most likely to occur?
- Is the problem sporadic?
- Is it cyclic?
- Is it triggered by conflict?
- Does it cluster by season?
- Does it show a long time trend?

- Wasting in pre-harvest season in Bangladesh
- Drought or flood seasons
- High “food insecurity” at end of month in US
- Steadily increasing trend toward obesity in US
- “Nutrition transition” in many developing countries
- Economic collapse (e.g., 1930s in US, 1998 in Indonesia; long recoveries)
- Dutch Winter Famine of 1944 (imposed, short term)
Seasonality of Bitot’s Spots and Night Blindness

First Year
Seasonal Peak in May/June
Second Year

Adapted by CTLT from Sinha and Bang, Lancet 1973
The “5 Ws” apply to many co-existing conditions in a population...

- **What?** Many concurrent nutrition problems and food security inequities of varying severity and importance...
- **Who?** …affecting populations across life stages, SE conditions and multiple cultural origins
- **Where?** …throughout a country, in some areas more than others (eg, periurban/urban vs rural)
- **When?** …year round or during seasonal peaks
- **Why?** Presumes we know causes – biologic, social, economic, cultural, political and (increasingly) structural or “external”
Questions Facing Food & Nutrition Policies

- **Why** should something be done?
- **What** should be done and who decides?
- **Can** a policy address the cause(s)? Or limit the extent of malnutrition? Directly? Indirectly? Presumes knowledge of causal paths and specificity of effects; “evidence-based”
- **Is** there sufficient political will?
- **How** is the policy to be be implemented? Nationally? Locally? Through what sectors?
- **How** can evolved interventions be legislated? regulated? Facilitated?
- **How** will implementation be monitored?
Questions Facing Food & Nutrition Policies

• ...among whom? Which groups of recipients and other stakeholders will benefit? Will not benefit?
• ...by what nutritional, health, economic, political indicators? Cutoffs? Using what evaluation designs?
• ...measured over what period of time? How frequently?
• How will the programs driven by the policy be funded? Subsidies? Market-borne? New taxes? Class action suits won?! Other “externalities”? International aid?
• What are the “opportunity costs” of the policy?
Sundry Observations…

• Those in need will never be the only policy beneficiaries; maybe not even the major ones!
• Developing, building constituencies, passing and implementing policy is a slow, “herd” process. Changing policy is usually just as slow.
• **The Ideal**: Policy emerges from a critical mass becoming aware of problems and involved, driven by evidence, converging with political commitment, resources and know-how across divergent sectors and groups of “stakeholders”.
• Polices may emerge that are less driven by evidence but by food economics, political agendas and industry via globalization
Food and Nutrition Policy Diamond

Policy Content

- Evidence
- Process
- Context
- Impact
Policy Content depends on…

**Evidence**
- Nutritional status, food availability, dietary patterns, health outcomes; size, location & conditions of risk groups

**Context**
- Type of food system, dietary culture, strength of economy, government stability and competence, private sector capabilities and influence, transport structure, level of food aid

**Process**
- Political action, legislation, regulation, level of enforcement, private sector cooperation, costs, cost recovery mechanisms, competition, non-nutritional priorities and concerns, perceptions, surveillance capabilities, media

**Impact**
- Nutritional status, diet intake & health outcomes; economic impact (profit) across sectors, agricultural and food industry effects, political gains & losses
Ideally, Food & Nutrition Policies should have

- Clear statement of goals (sometimes occurs)
- Quantifiable benchmarks (often not)
- Orderly, well-defined process (usually not)
- Sufficient funding to implement (sometimes)
- Stakeholder recognition, cooperation and defined expectations (rarely)
- Evaluation process (eventually... sometimes)
Nutrition Policies: Integrated with Other Sector Policies

Food and Nutrition Policy

- Agriculture
- Health
- Education
- Social Welfare
- Food
Nutrition Policies: “Stakeholders”

- Consumers
- NGOs (consumer groups) INGOs
- Government Agencies
- Politicians Political parties
- Donor Governments
- Food Producers
- Farmers Seeds & Fertilizer Transport Storage
- Fishing Industry
- Academia and Research
- Schools & Institutions
- Food Wholesalers and Retailers
- National Food Companies Multinationals Supermarkets
- Food Manufacturer & Processors
- High SES Middle Income Poor
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