

**TRAINING FOR
IMPROVED PRACTICE:
Public Health and Nutrition in Emergencies**

**Access to Adequate Food
Food Security and Food Aid**

UNICEF Core Corporate Commitments Training in collaboration with:

**Feinstein International
Famine Center,
Tufts University**

**Mailman School of Public
Health,
Columbia University**

**International Emergency and
Refugee Health Branch,
Centers for Disease Control**

Overview

- Food security, nutrition and health; what are the linkages and why is it important to UNICEF?
- Food security; frameworks for assessment
- Evaluating food rations
- Food basket monitoring; when and why?
- Delays in food distribution

Exercise

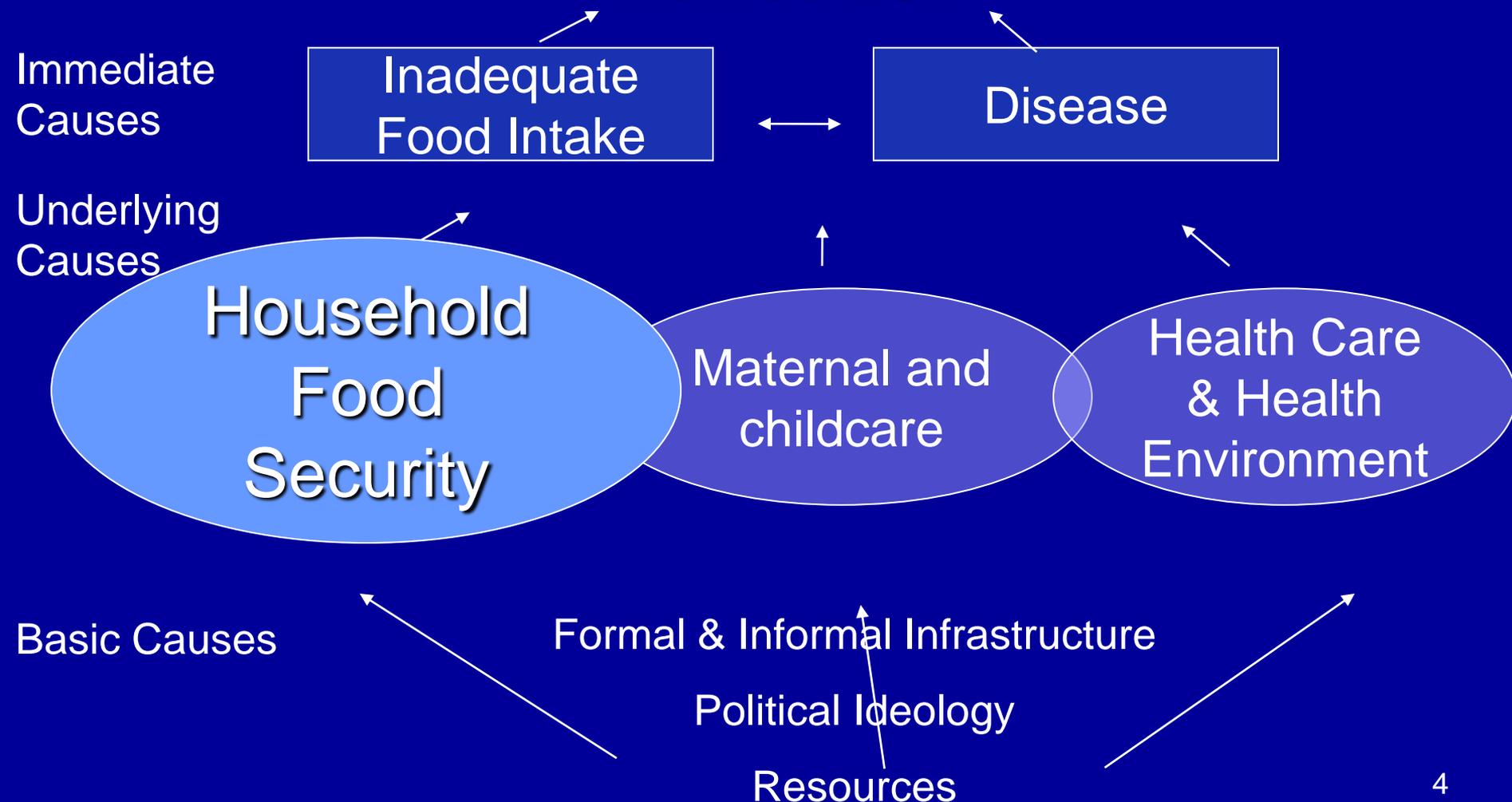
*Why are food aid
and food security
relevant and
important to
UNICEF?*



Analysis

A Conceptual Framework of Causes of:

Malnutrition



Analysis: Affect Of Food Security On Health and Nutrition



Analysis: Affect Of Food Security On Health and Nutrition



Linkages:

Complementarity of Food-based and Food Security Strategies and Public Health Interventions

- Food aid works best when complementing the provision of other priority needs
- Food aid provides opportunities for:
 - Income-generating activities such as roads, building schools, and teaching skills e.g. Asset creation in Afghanistan
 - Vitamin A distribution with registration for food distribution
- Food security interventions (agricultural, market access, livestock) may assist people in diversifying their diet (milk products, variety of food)

Impact:

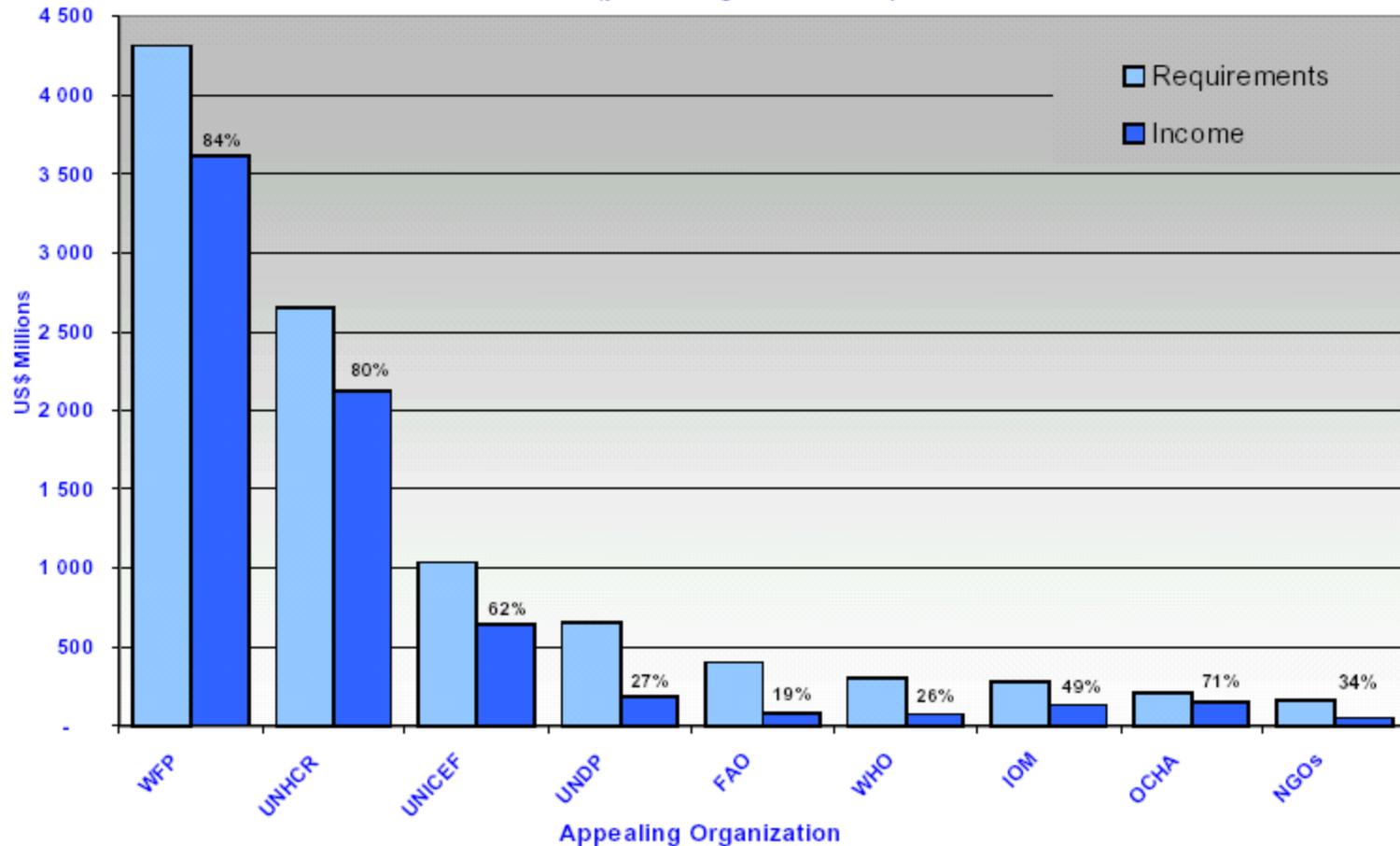
Food Based Strategies on Health and Nutrition

Design of General Food Distribution affects:

- Quality and quantity of general ration (in terms of meeting nutritional requirements)
- Timeliness
- Targeting strategies may not take account of 'nutritional vulnerability'
- '*Magnet*' affect causes over-crowding around food distribution points

Funding in the Food Sector

CAP REQUIREMENTS vs. INCOME
CUMULATIVE 1996 - 2000
(percentage resourced)



Food Security: Assessment and Analysis

FAO/WFP Food and Crop Assessment Missions

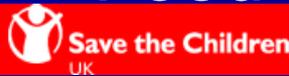
- Food Balance Sheets – Global Information and Early Warning System of FAO

Food security monitoring and information systems

- Early warning systems (indicator based) – FIVIMS, FEWS, FSAU, VAM *What do these acronyms stand for?*

Food security assessments

- Household economy
- Livelihood approaches
- MSF – what doctors/nurses need to know about food security
- UNICEF – General Household Food Security Assessment Tool



FAO/ WFP Food & Crop Assessment: Food Balance Sheet



Food Aid Needs = National Food Needs – Food Available

Total Utilization – (Domestic Availability + Import Capacity)

Example: 2001/02 Afghanistan Cereal Balance Sheet

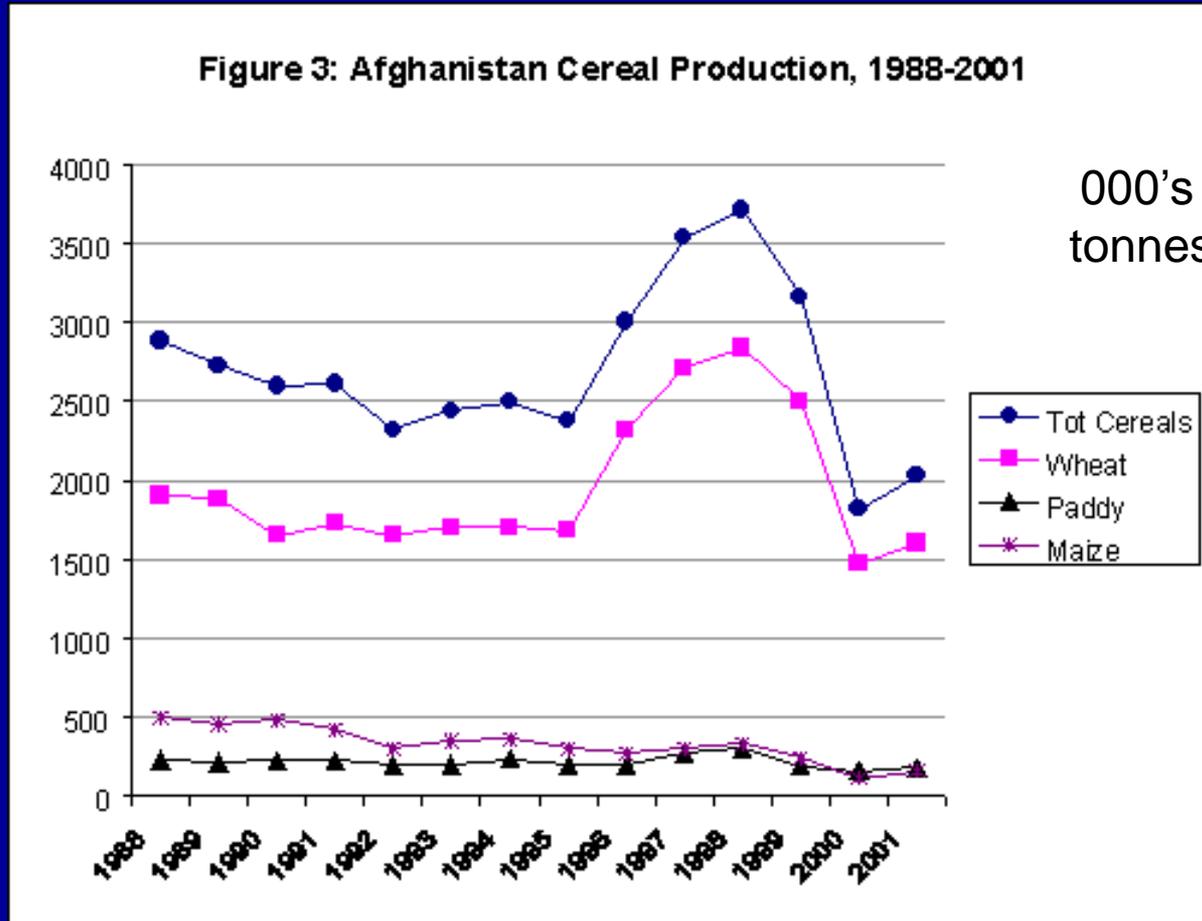
(‘000 tonnes)

Total Utilization *	4,145	*food, feed, seed, other
Domestic Availability	1,967	
Import requirements	2,178	
Commercial import capacity	760	
Food Aid planned by WFP	386	

Uncovered food deficit **1,032**

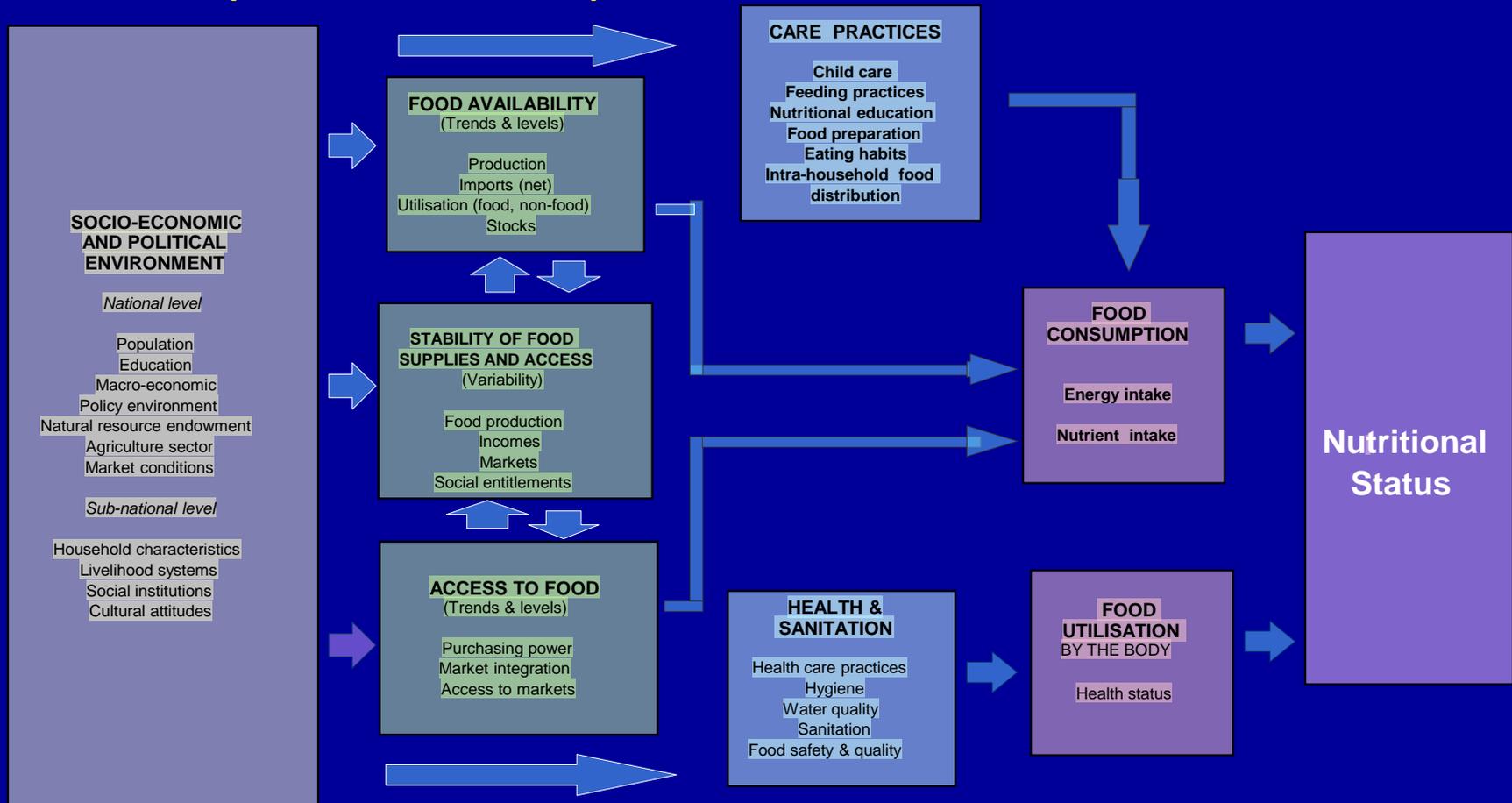
Source: FAO/ WFP . 2001. *FAO/WFP
Crop and Food Supply Assessment
Mission to Afghanistan. Special Alert
No 315*, FAO GIEWS, WFP.

Monitoring Trends



Source: FAO/ WFP . 2001. *FAO/WFP Crop and Food Supply Assessment Mission to Afghanistan. Special Alert No 315*, FAO Global Information and Early Warning System on Food and Agriculture, World Food Programme.

Conceptual Framework for Linking Contextual Information with Food Security Indicators and Outcome Indicators (Nutritional Status)



Source: *Guidelines for the Establishment of National FIVIMS*, IAWG, 1998

**THE FOOD ECONOMY MODEL:
a framework for understanding rural
livelihoods Food economy analysis:
the process**

- 1. The baseline picture**
- 2. Problem specification**
- 3. Scenario analysis**
- 4. Results**

Food security: Beyond food availability

Definition

“...food is available at all times, that all persons have means of access to it, that it is nutritionally adequate in terms of quantity, quality and variety, and that it is acceptable within the given culture.”

(UN Food and Agriculture Organisation, 1995)

Availability - quality and quantity of food supply

Access - access to food through purchases, exchange and claims

Utilization - household food management; distribution, storage and preparation

Temporal seasonal aspects

UNICEF's General Household Food Security Assessment Tool

Access, equity

- Sources of food and income
- Barriers to food access for different livelihood groups
- Food stocks, savings, marketable assets
- New or intensified coping mechanisms
- Impact of food insecurity on women, & hh composition

External shocks

- Expected change in external factors that will affect food security – peace, devaluation, access

Temporal dimension

- Seasonal aspects of food insecurity

Nutritional quality

- Impact of food security on micronutrient needs

Food Aid: Planning and Evaluating Rations

Case-Example Scenario:

- Sept. 2000 extensive flooding in SW Bangladesh
- 2.7 million affected people in 6 districts
- Extensive material and crop damage
- Affected landowners who lost crops, and landless who depend on agricultural employment
- Large areas of land remain under stagnant water.
- 1.4 million people face winter in precarious conditions – food insecure, temporary shelter without warm clothing

Food Aid: Evaluating Rations

- Government of Bangladesh initially provided 400g rice per person per day
- WFP propose a general food distribution for the poorest rural households in the worst affected areas for 6 months until next crop in May 2001.
- Aim: to prevent any further setback in food security or nutritional status until the next rice harvesting season in May 2001.
- Ration: 330g rice; 66g pulses; 30g oil

EXERCISE

1. *For each ration calculate:*
 1. Total energy pppd
 2. Grams of protein pppd and percent of energy provided by protein
 3. Grams of fat pppd and percent of energy provided by fat.
2. *How do you judge if these rations are adequate?*

Food Aid: Evaluating Rations

Food Basket Calculator

Table A Government of Bangladesh Ration

GoB Ration	Kcal	Protein	Fat g
400g Rice	1440	28	2
TOTAL	1440	28	2
% Energy		7.80%	1.30%

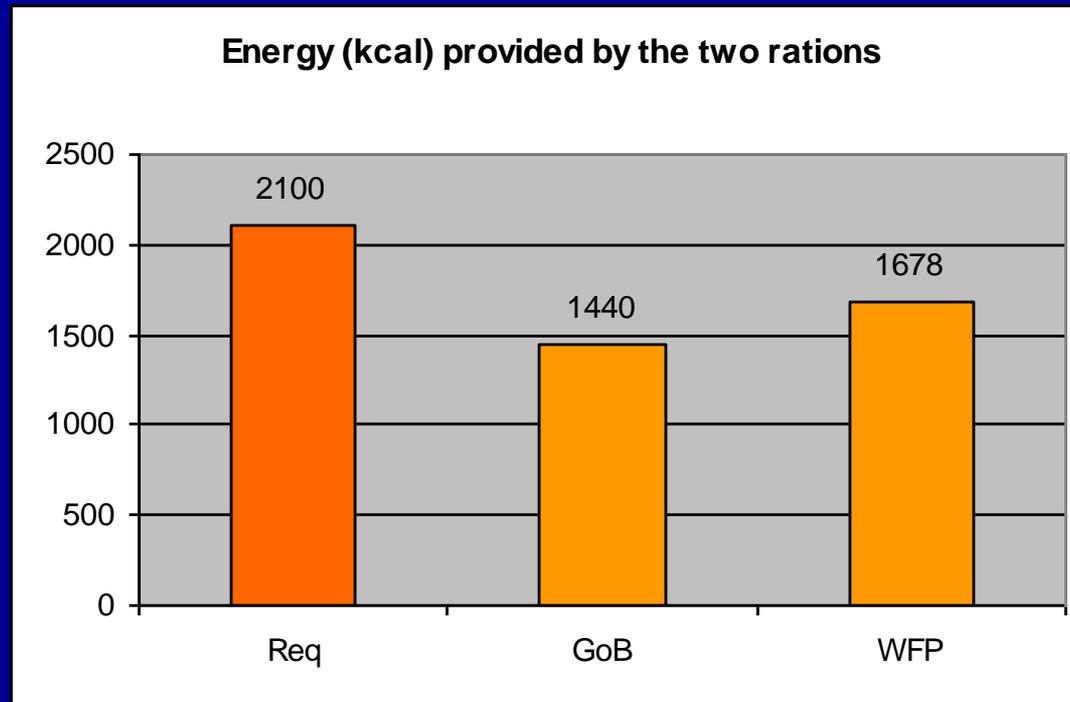
Table B WFP ration

WFP Ration	Kcal	Protein	Fat g
330g rice	1188	23.1	1.65
66g pulses (lentils)	266	0	30
30g oil	224	13.2	0.396
TOTAL	1678	36.3	32
% Energy		8.70%	17.20%

Food Aid: Evaluating Rations

Energy

The minimum average energy requirement per person per day is 2,100 kcal.



When is it acceptable to increase or decrease the amount of energy in the ration?

Adjusting the Initial Planning Figure for Energy

2100 kcal

The age and sex structure of the population

- Exclusively women and children -6%

-126 kcal

1974 kcal

Health, and nutritional status

- 5- 10% malnutrition +5 kcal
- 10 –15% acute malnutrition +10 kcal
- >15 % acute malnutrition + 20 kcal

+20 kcal

1994 kcal

Physical Activity Level

- For moderate activity + 100 kcal
- For moderate/ heavy activity + 150 kcal
- For heavy activity + 250 kcal

+100 kcal

2094 kcal

Environmental Temperature

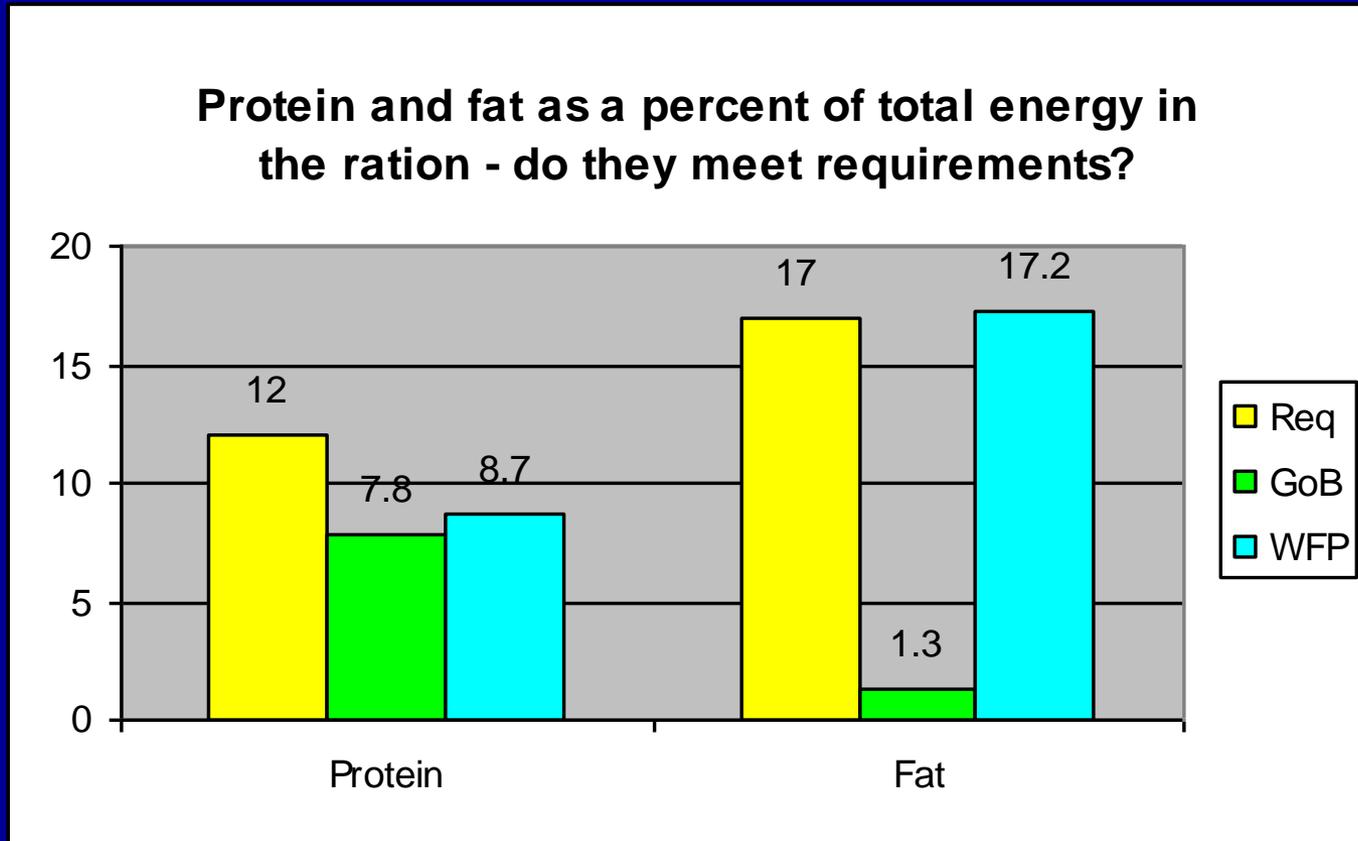
- For every 5°C drop below 20°C + 100 kcal

+100 kcal

2094 kcal

Food Aid: Evaluating Rations

Protein and Fat



Protein should provide 10% -12% of energy

Fat should provide at least 17% of energy

Food Aid: Evaluating Rations

Micronutrients

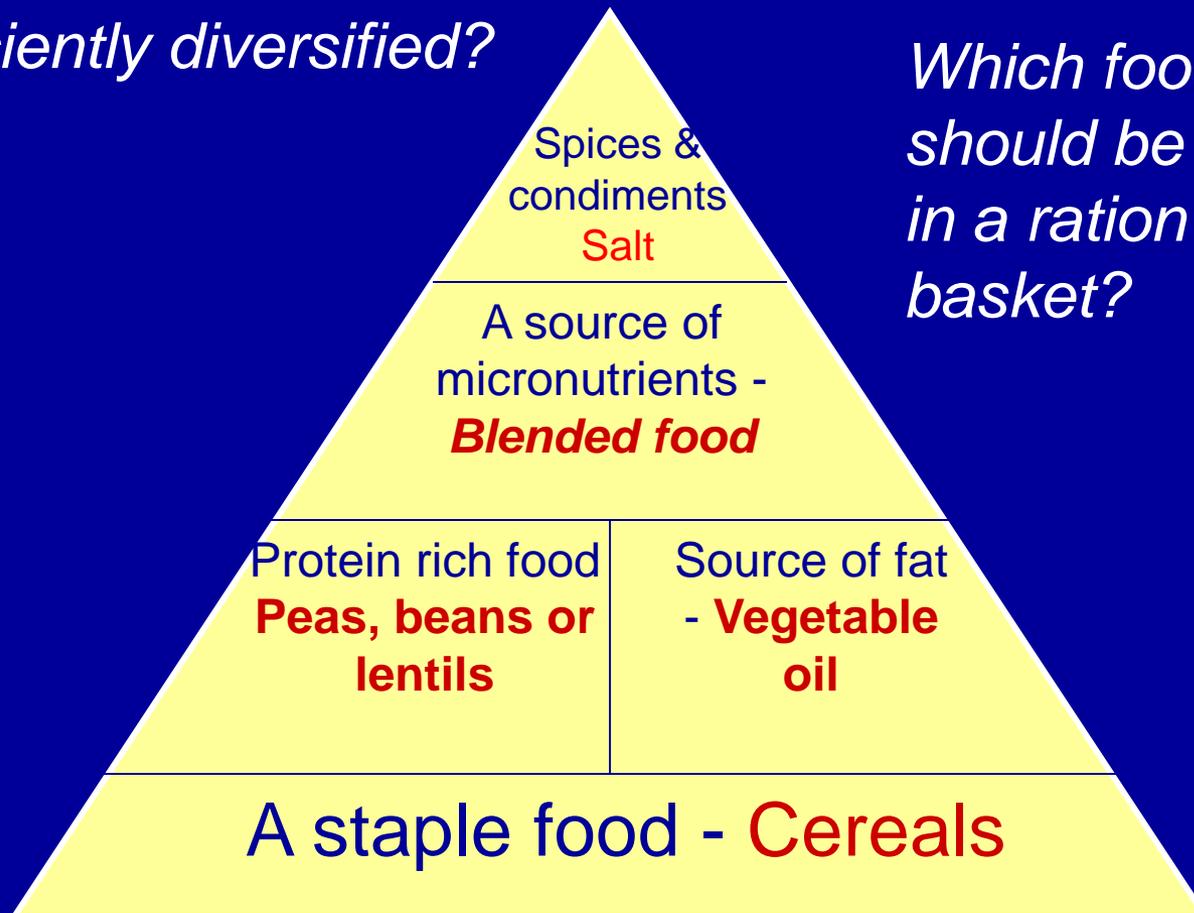
- Nutritionally adequate rations should provide all micronutrients.
- One-dimensional provision of wheat or rice will alleviate starvation, but will **NOT** prevent malnutrition.
- Fortification:
 - Salt must be iodized
 - Vegetable oil must be fortified with vitamin A
 - Fortified blended foods are often included to provide a broader range of micronutrients.

Food Aid: Evaluating Rations

Diversified

✓ *Is it sufficiently diversified?*

Which food groups should be included in a ration or food basket?



Food Aid: Evaluating Rations

Other factors

- ✓ Is it acceptable and broadly familiar



Food Aid: Evaluating Rations

Other factors

✓ Is it fit for human consumption?



Food Aid: Evaluating Rations

Other factors

✓ Is it easily digestible for children?



Food Aid: Evaluating Rations

Other factors



✓ Is it economic in terms of fuel requirements and preparation time? i.e. milling & fuel efficiency

GM Food Aid

BBC report...
29 October 2002

**Famine-hit Zambia rejects
GM food aid**



Some 14 million are at risk of famine across the region

The Zambian Government has finally decided not to accept a donation of genetically modified food for nearly three million of its people facing famine.

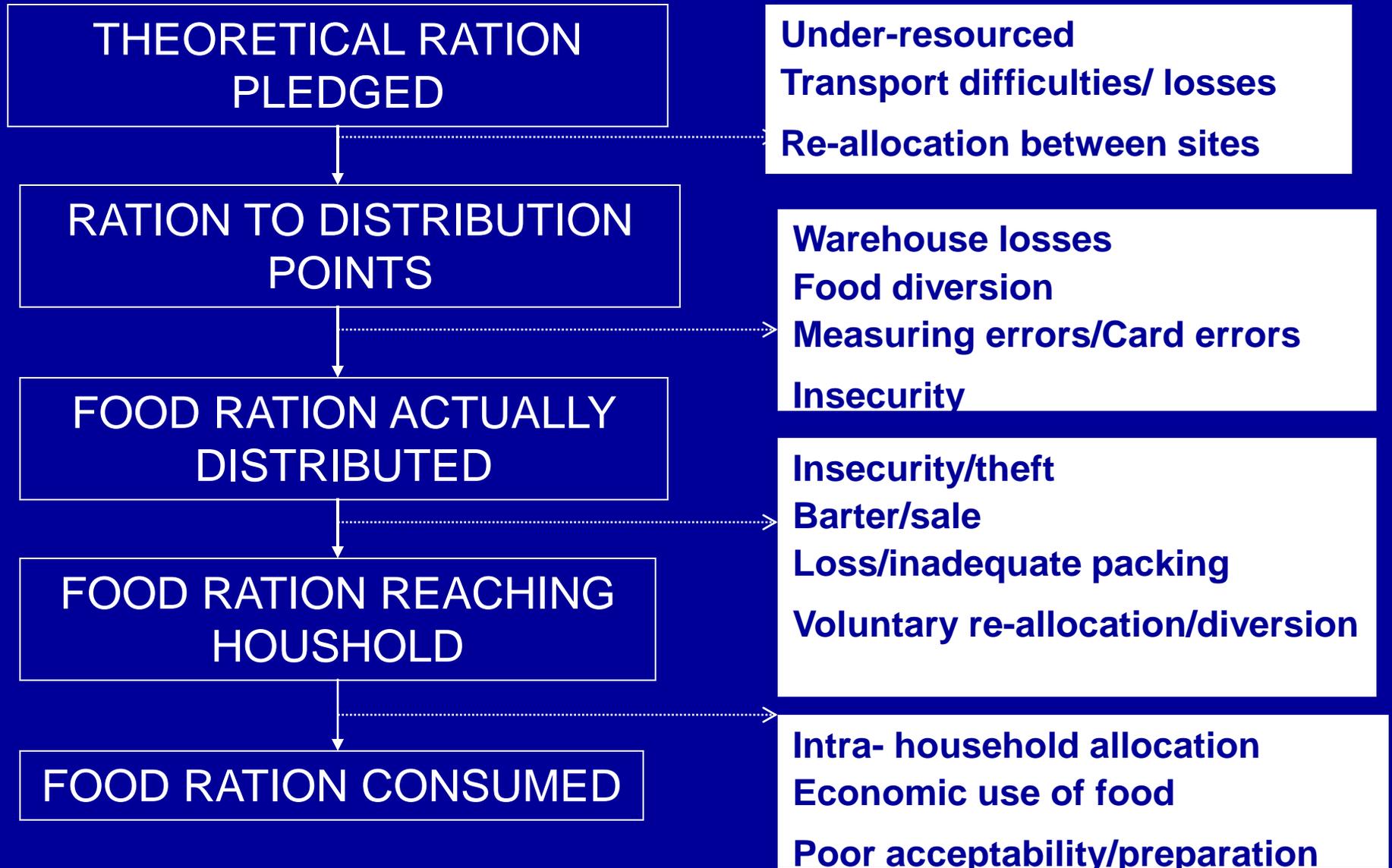
President Levy Mwanawasa referred to the food as "poison".

GM food aid in southern Africa

- In 2001 governments in southern Africa refuse to accept GM food aid. *Why not?*
 - Safety concerns – *evidence?*
 - To prevent dissemination of GM seed and subsequent threat to their international trade
- Zimbabwe, Mozambique, Malawi and Lesotho later permitted milled GM maize
- Zambia continued to refuse
- Response:
 - Increase in local purchase
 - Milling of imported cereals (opportunity to fortify)

General Food Ration

Food flow from donor to beneficiary



Food Basket Monitoring

- *Objective:*

To compare the actual food rations received by beneficiaries as compared with the planned rations

- *Who does it?*

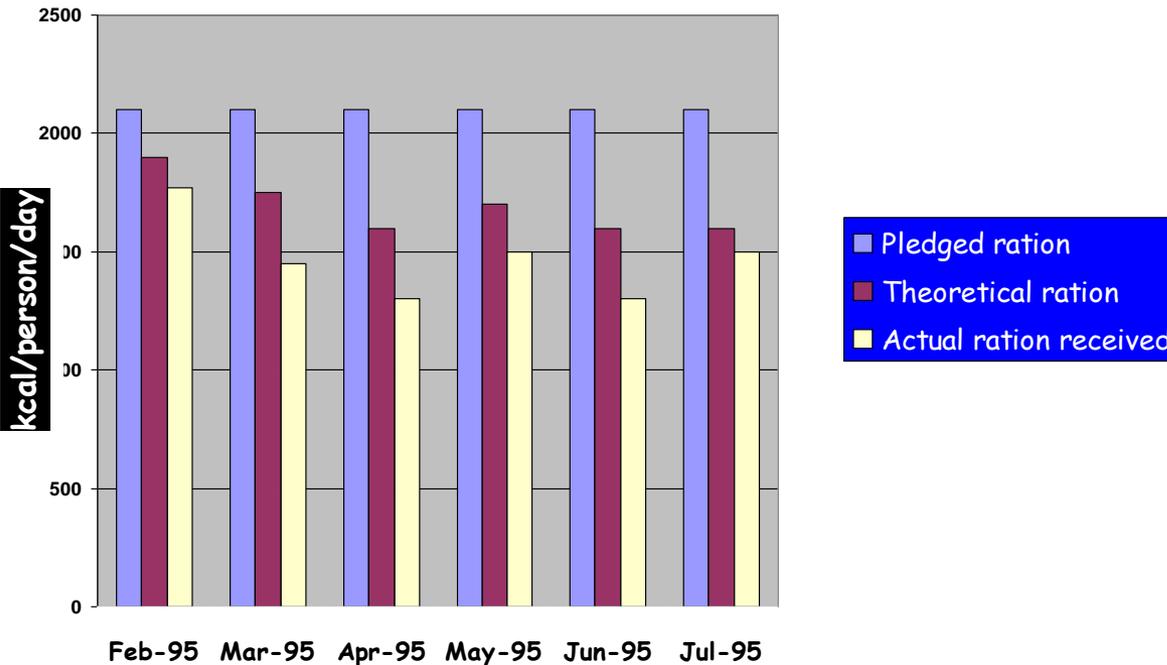
Usually done by a health agency, e.g. MSF, ACF (not involved in the actual food distribution)

- *Method:*

A random sample of households selected directly after distribution. Rations checked against ration scale and household size

Can you think of examples of food basket monitoring in a situation where UNICEF is working?

Food Basket Monitoring



Pledged Ration;

Amount agreed in Food Assessment Mission

Theoretical Ration:

Amount available for distribution as a result of donor contributions.

Actual Ration:

Amount actually received by beneficiaries

Food Deliveries: Impact of delays

In Northern Uganda (Ikafe/Imvepi) an Oxfam study indicated food deliveries were delayed because:

- Restricted access to the population; remote locations, insufficient infrastructure.
- Lack of resources and variable donor commitment
- Disagreement over the accuracy of beneficiary numbers linked with registration

Food Deliveries: Impact of delays

- Movement into unsafe areas in search of food (to cultivate fields) risking beatings, rape, even death, mines
- HIV risk
- The sale of assets and incursion of debt
- The depletion of food and seed stocks & consumption of seeds for cultivation
- Activities with more socio-political implications (theft, prostitution, desertion)
- Malnutrition and increased risk of morbidity and mortality.

Review

- Food security affects health and nutritional status
- The impact of nutrition and health programmes are seriously diminished if food security is inadequate
- A basic understanding of food availability, access and utilization is central to understanding food security
- Nutritionally adequate rations must be planned according to basic nutrition principles, which are also relevant to evaluating rations
- A shortfall in food rations is common, which has detrimental effects on nutritional status and the impact of other programmes.