

# How Is the Harmonized System Applied in Tracking and Monitoring World Food Insecurity?

Greg X. Gong

FAO - Rome Italy

[xiaoning.gong@fao.org](mailto:xiaoning.gong@fao.org)

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Workshop on “Amending the WCO’s Harmonized System  
to Strengthen Non-Proliferation Efforts for Bioweapons”

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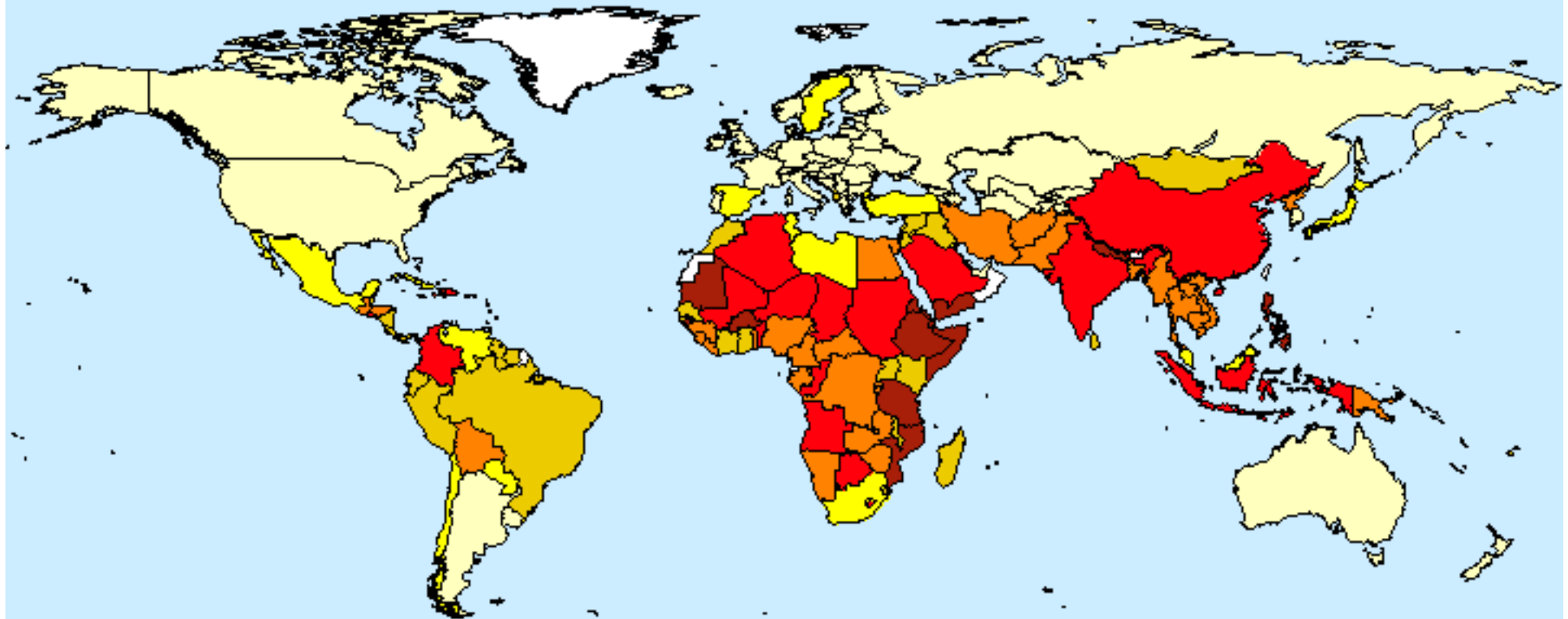
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# Presentation Outline

- Tracking and monitoring world food insecurity
  - Food balance sheet as a basic model
  - Data of production, trade, and stock of food items
  - Role of classifications
  - FAO involvement in the revision and update of international classifications
  - FAO Proposal for HS
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# Undernourished Population

1970



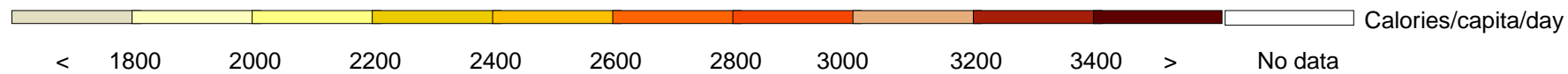
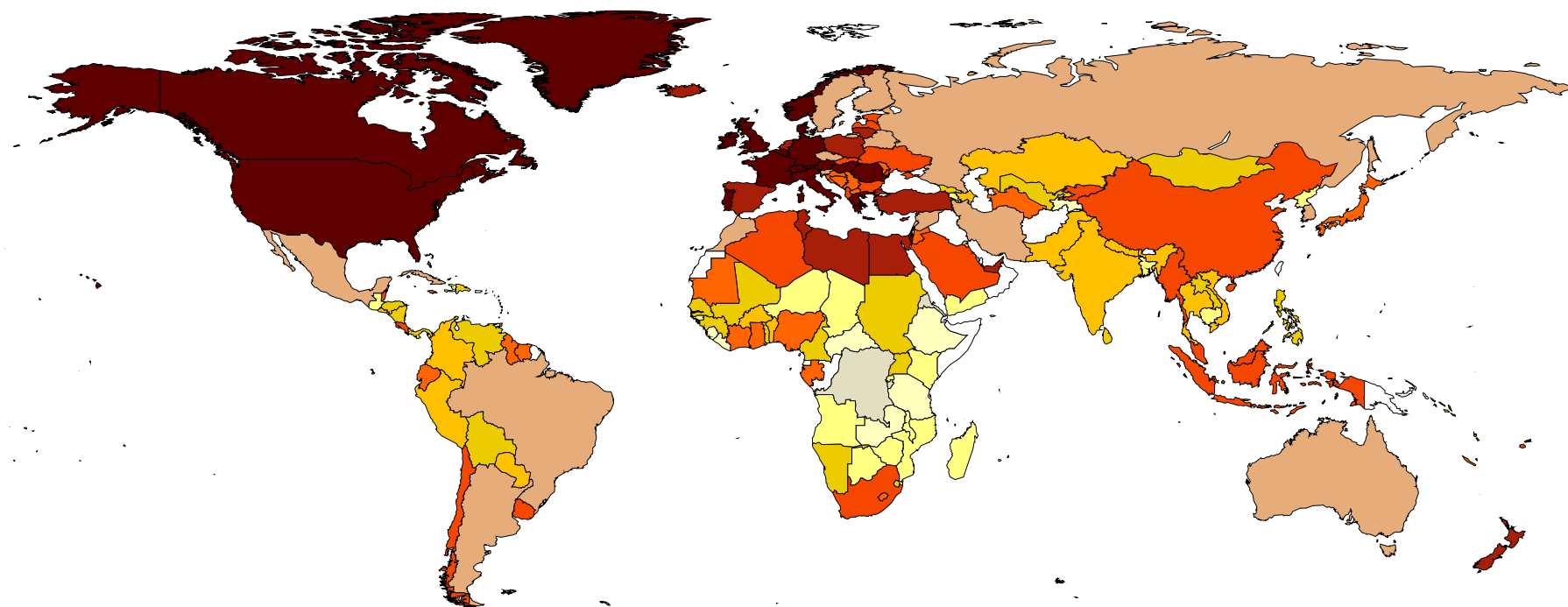
< 5 15 25 35 50 > No data % of Total Population

★ 1970 1971 1980 1981 1990 1991 1993 1994 1996 1997 1998 1999 2000 2001 2002

Click the red star to exit the animation

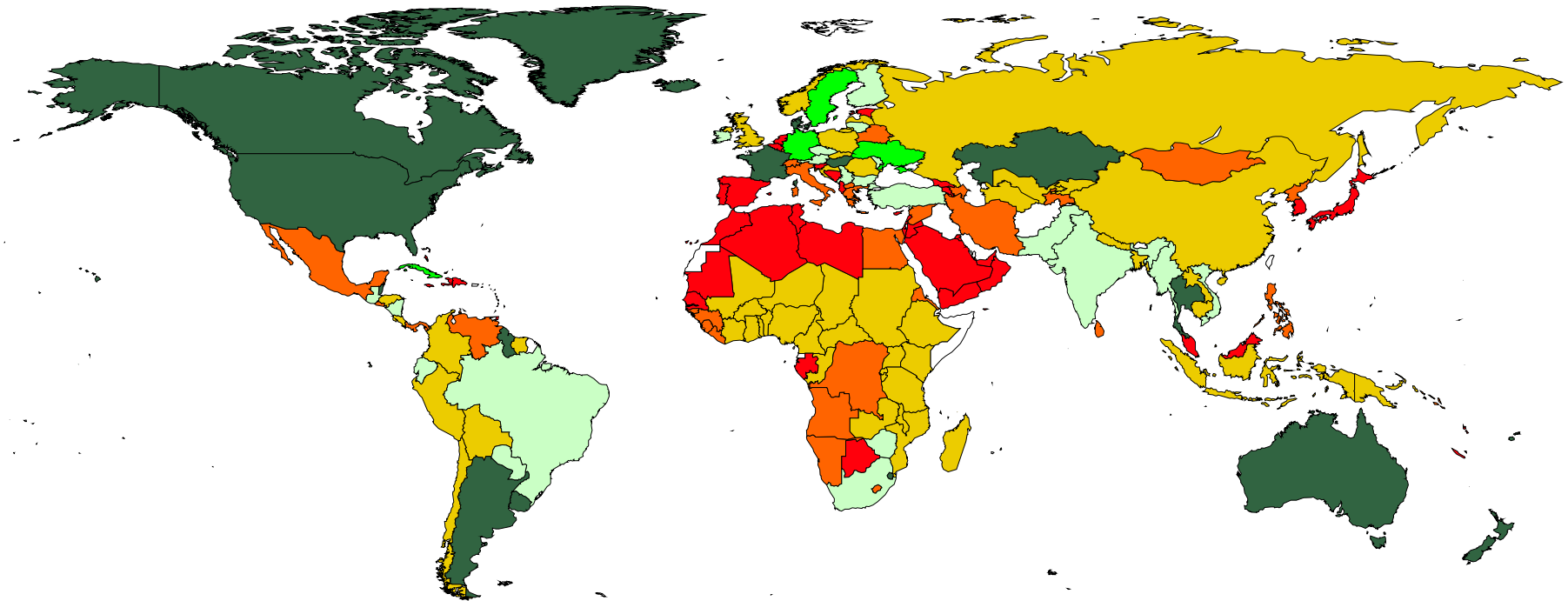
# Dietary Energy Consumption

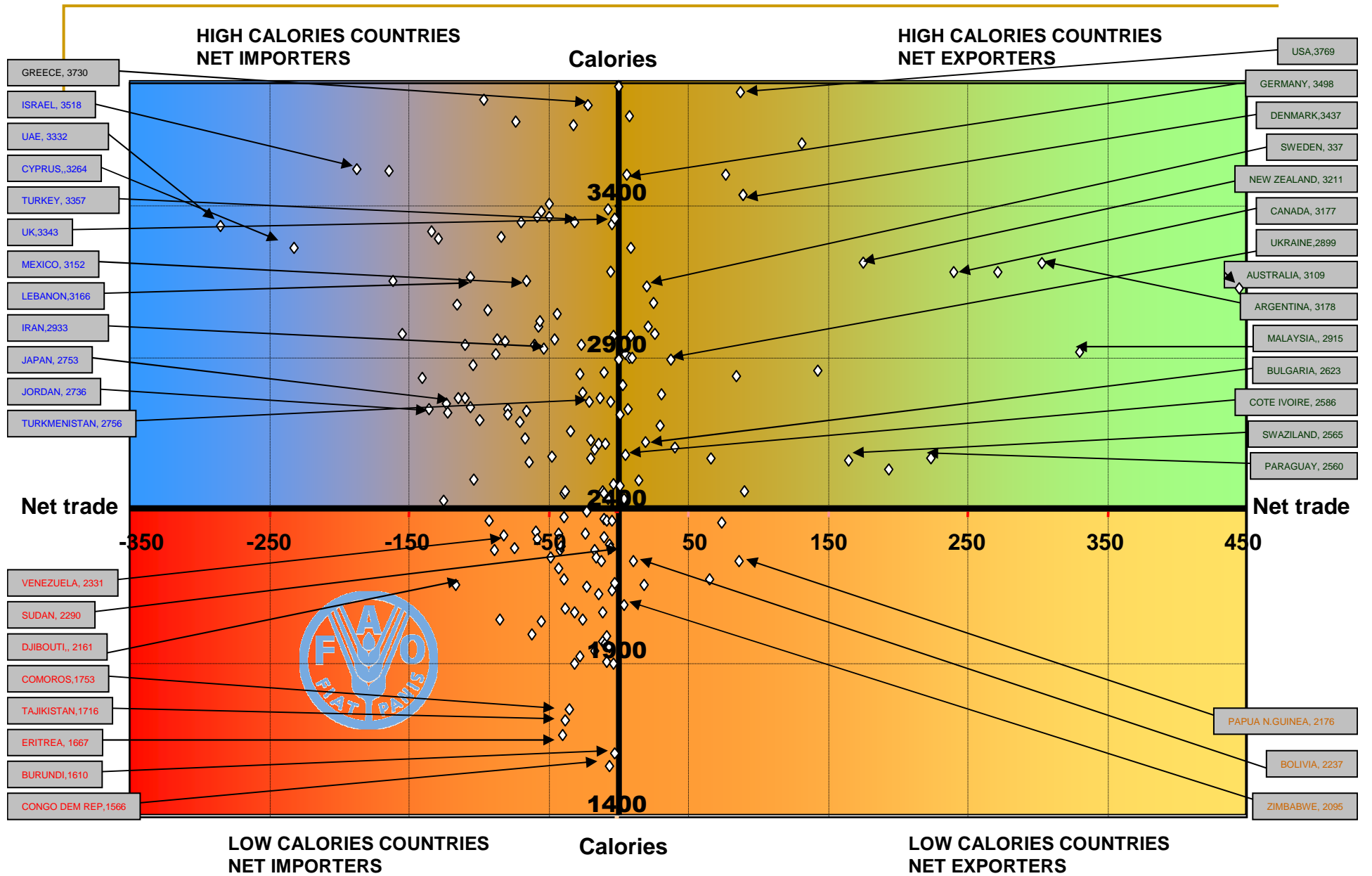
2000-2002



# Net Trade in Food

2000-2002





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# Measuring Undernourishment

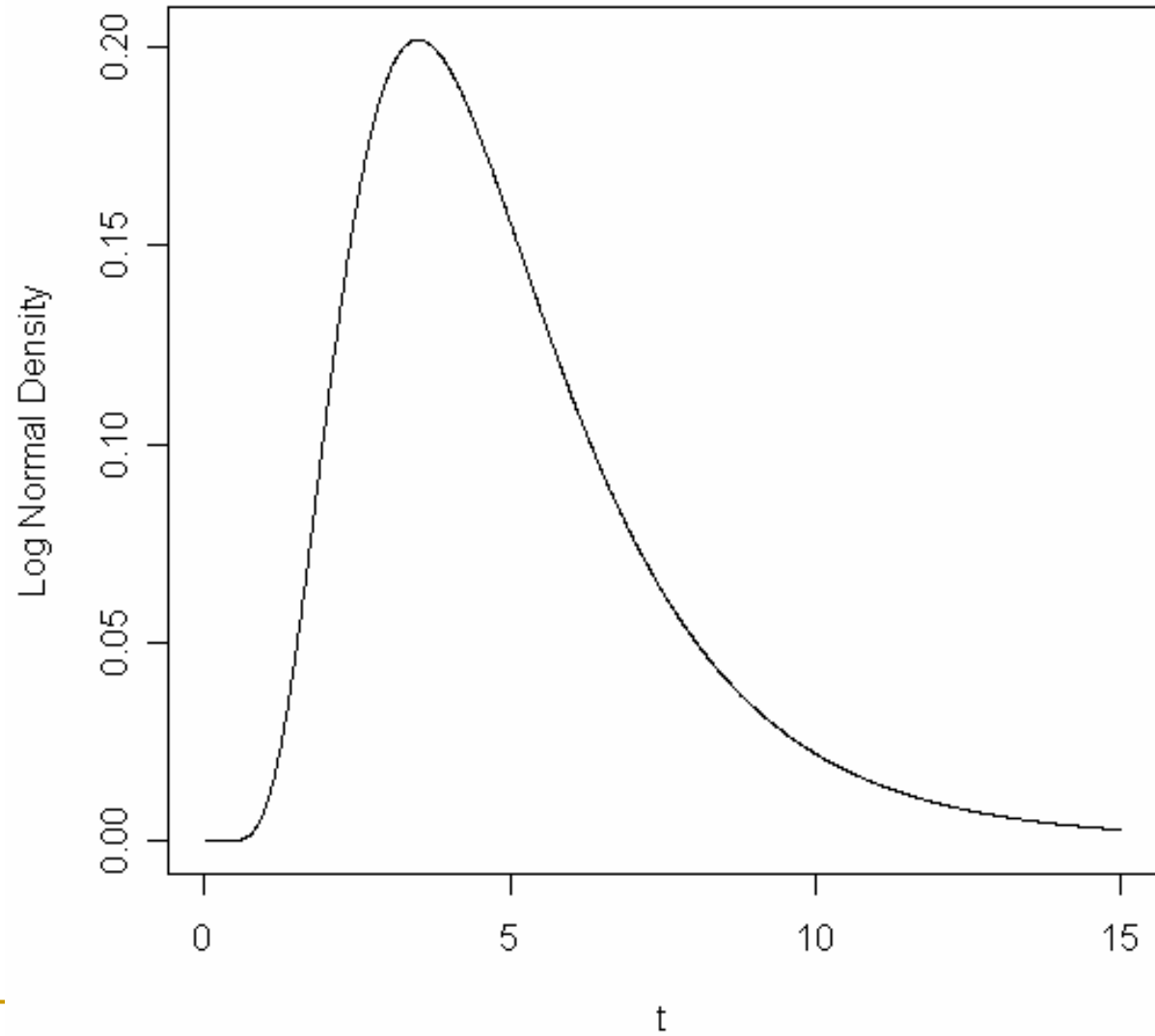
- To estimate the proportion of the population below the minimum level of dietary energy consumption:

$$P(U) = P(x \leq r_L) = \int_{x \leq r_L} f(x) dx = F_x(r_L)$$

- $P(U)$ : the proportion of undernourished in total population
  - $(x)$ : the dietary energy consumption
  - $(r)$ : the minimum level of dietary energy requirement
  - $f(x)$ : the density function of dietary energy consumption
  - $F_x$ : the cumulative distribution function
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*The density function  $f(x)$  is assumed to follow the lognormal distribution*





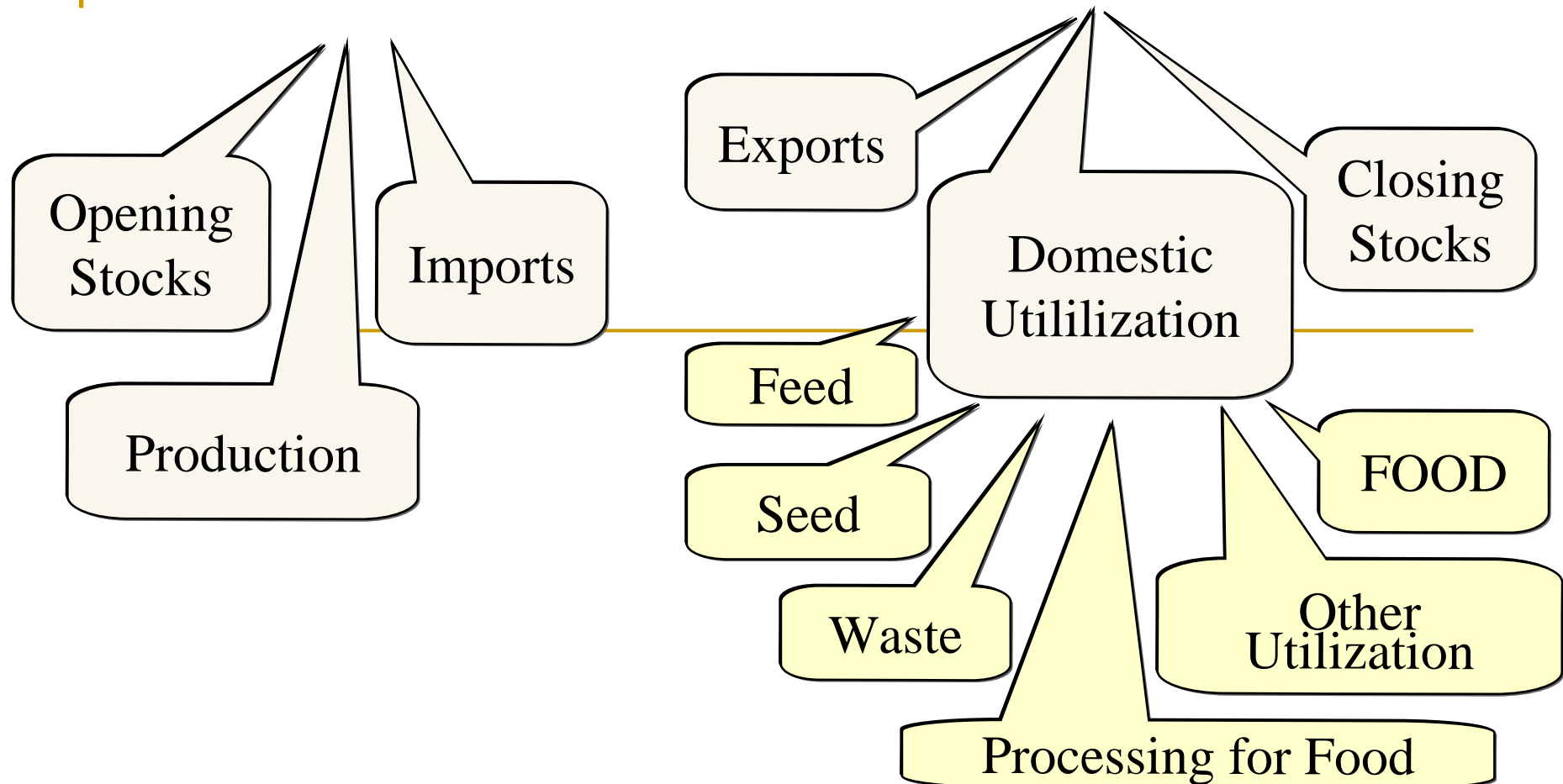
Kazakhstan  
FOOD BALANCE SHEET  
(Year 2002)

Population 15,469,000

PRODUCTS	DOMESTIC SUPPLY					DOMESTIC UTILIZATION						PER CAPITA SUPPLY			
	Prod-	Impo-	Stock	Exp-	TOTAL	Feed	Seed	F/Manur	Waste	Uses	Food	Kg / Yr.	CAL- No.	PER DAY PRO Gr.	FAT Gr.
1000 Metric tons															
Grand Total												2577	1197	34.8	4.4
Vegetal Products												1991	84.7	31.8	
Animal Products												686	42.1	44.2	
Cereals - Excluding Beer	15861	109	-2176	5864	7929	1952	1729	53	999	671	2526	163.3	1197	34.8	4.4
Wheat	12700	52	-1200	5142	6411	1270	1500	0	742	656	2242	144.9	1056	31.4	3.9
Rice (Milled Equivalent)	133	2	-7	7	121	1	8		13		99	6.4	62	1.2	0.1
Barley	2209	39	-690	634	924	400	168	53	192	0	110	7.1	44	1.2	0.2
Maize	435	6	-235	14	192	110	23		33	15	11	0.7	5	0.1	0.0
Rye	106	1	-60	5	42	11	4		8		19	1.2	9	0.2	0.0
Oats	183	3	10	45	151	114	20		5		12	0.8	4	0.2	0.1
Millet	39	0	0	2	37	23	2		3		9	0.6	5	0.1	0.0
Sorghum	0	0		0	0	0	0		0						
Cereals, Other	55	6	6	16	51	22	4		2		23	1.5	11	0.3	0.0
Starchy Roots	2269	9	-70	0	2208	180	330	88	90	19	1501	97.0	178	4.2	0.3
Cassava															
Potatoes	2269	9	-70	0	2208	180	330	88	90	19	1501	97.0	178	4.2	0.3
Sweet Potatoes		0			0						0	0.0	0		
Yams															
Roots, Other		0	0		0						0	0.0	0		

# BFS - Base Equation

$$\mathbf{SUPPLY} = \mathbf{UTILIZATION}$$



Sources of informations

Type of data

National publications, CD-Rom, FTP, diskettes, tapes,... and FAO questionnaires

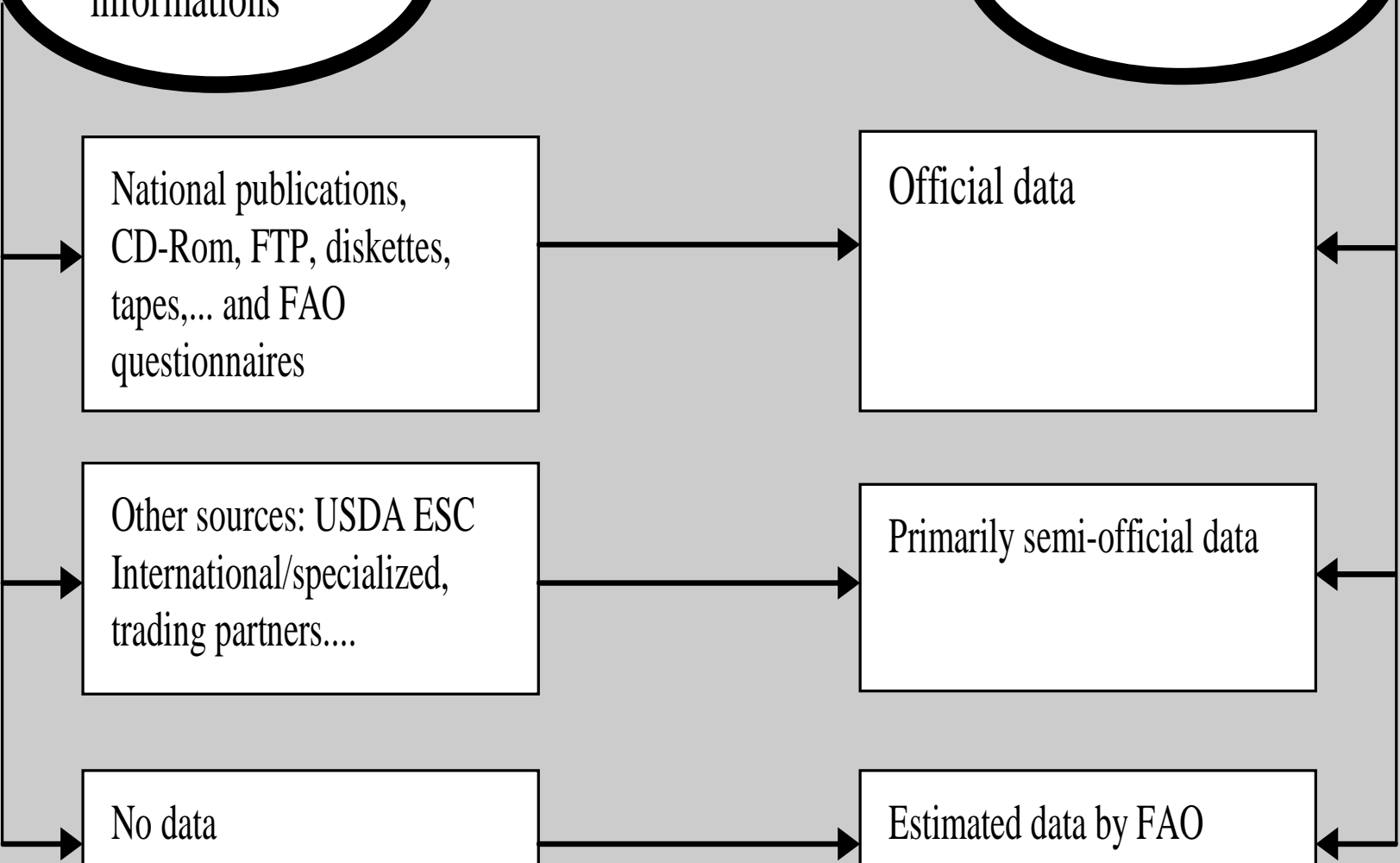
Official data

Other sources: USDA ESC International/specialized, trading partners....

Primarily semi-official data

No data

Estimated data by FAO



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# What Data Do We Need ...

- Production, trade, & stock data for all main food items including:
    - Products of agriculture, horticulture and market gardening
    - Live animals and animal products (excluding meat)
    - Fish and other fishing products
    - Food products, beverages and tobacco; textiles, apparel and leather products
    - Meat, fish, fruit, vegetables, oils and fats
    - Dairy products and egg products
    - Grain mill products, starches and starch products; other food products
    - Beverages
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❑ Products of agriculture, horticulture and market gardening

- Cereals
- Vegetables
- Fruit and nuts
- Oilseeds and oleaginous fruits
- Edible roots and tubers with high starch or inulin content
- Stimulant, spice and aromatic crops
- Pulses (dried leguminous vegetables)
- Sugar crops

❑ Live animals and animal products (excluding meat)

- Live animals
- Raw milk
- Eggs of hens or other birds in shell, fresh

❑ Fish and other fishing products

- Fishes, live, fresh or chilled
- Crustaceans, not frozen; oysters; other molluscs and aquatic invertebrates, live, fresh or chilled
- Other aquatic plants and animals

❑ Food products, beverages and tobacco; textiles, apparel and leather products

❑ Meat, fish, fruit, vegetables, oils and fats

- Meat and meat products
- Prepared and preserved fish, crustaceans, molluscs and other aquatic invertebrates
- Prepared and preserved vegetables, pulses, and potatoes
- Prepared and preserved fruit and nuts
- Animal and vegetable oils and fats

❑ Dairy products and egg products

- Processed liquid milk and cream
- Other dairy products
- Eggs, preserved or cooked
- Grain mill products, starches and starch products; other food products

❑ Grain mill products

- Bakery products
- Sugar
- Cocoa, chocolate and sugar confectionery
- Macaroni, noodles, couscous and similar farinaceous products

❑ Beverages

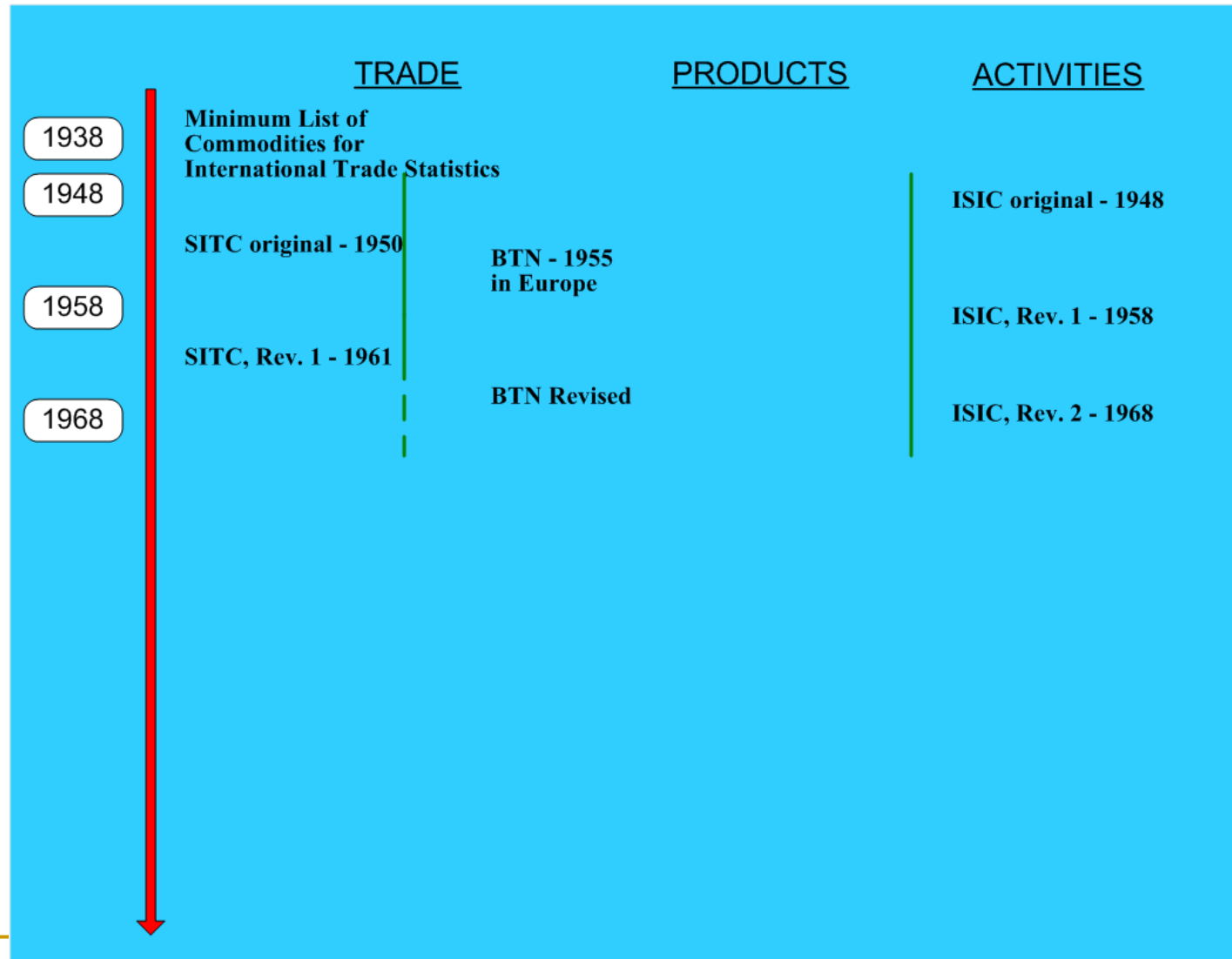
- Ethyl alcohol; spirits, liqueurs and other spirituous beverages
- Wines
- Malt liquors and malt
- Soft drinks; bottled mineral waters

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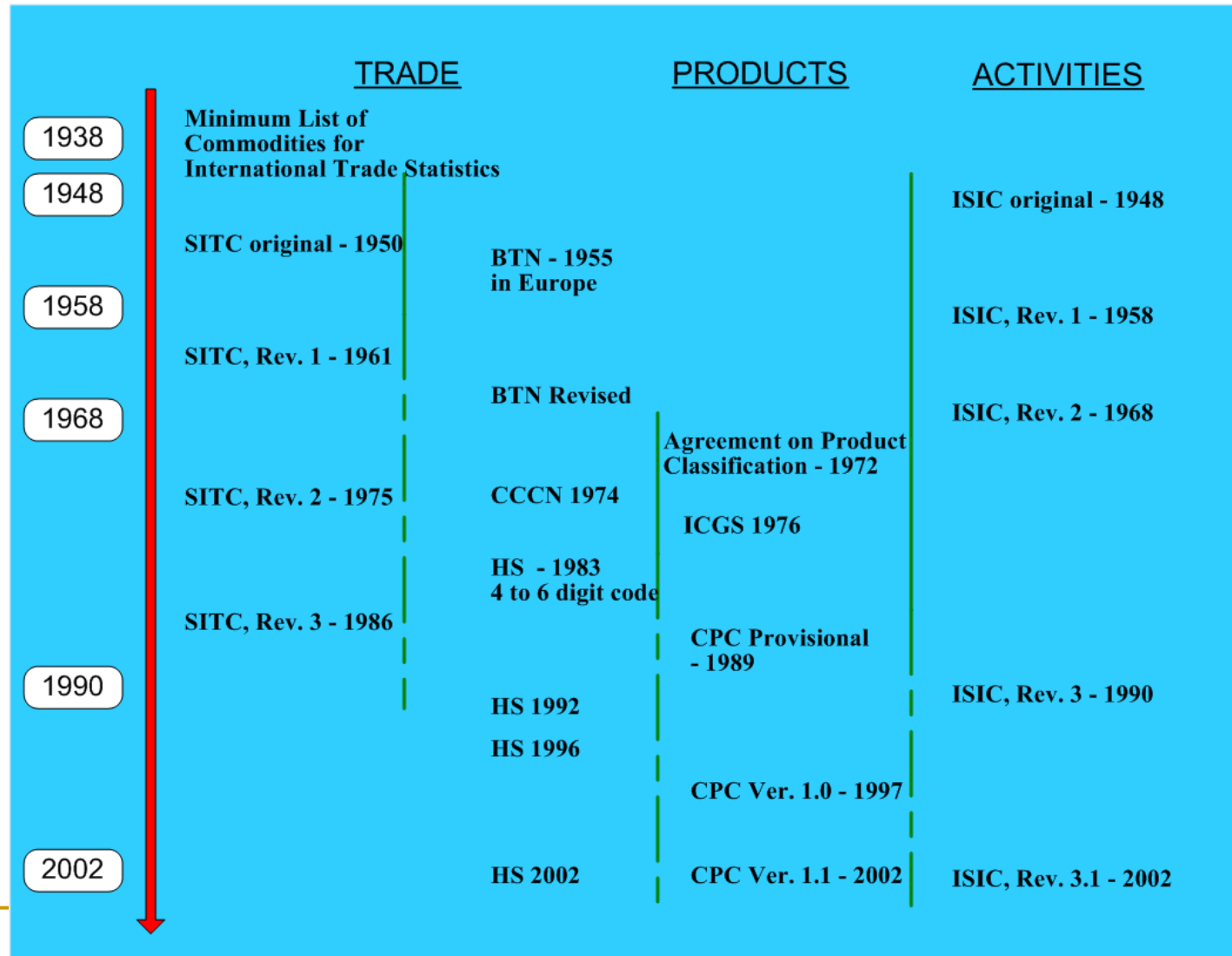
# The Role of Classifications

- By providing a common and standardized code, name, title, definition, and description for the individual item listed and a common and standardized way to group data.
  - A common classification is a powerful infrastructure and tool for
    - ❑ coordinating and integrating official statistics;
    - ❑ ensuring the comparability of statistical data over time and across sections and countries; *thus*,
    - ❑ Promoting “communication” among datasets.
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# Economic Classifications

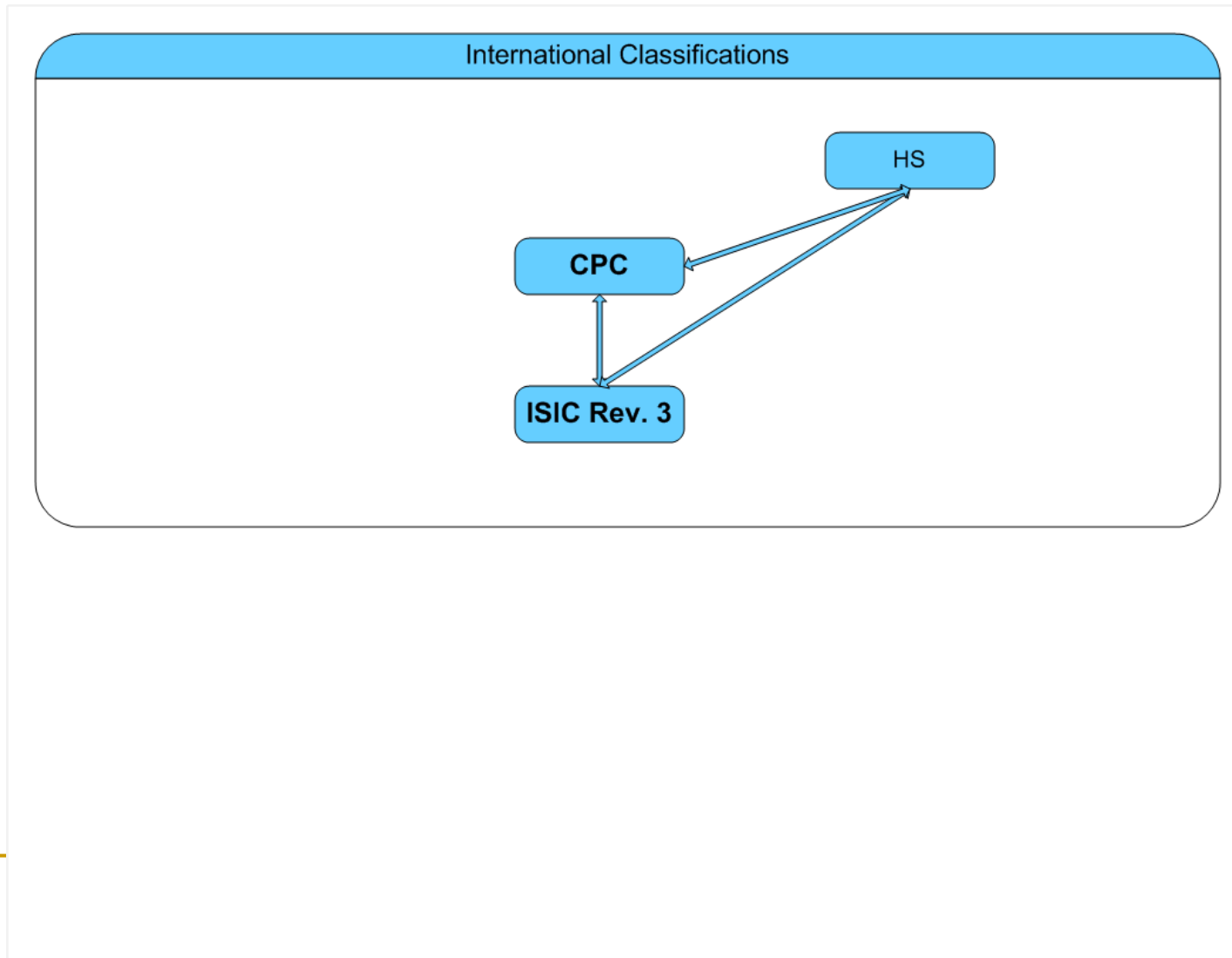


# Economic Classifications (Cont'd)





# Correspondences



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# Problem with Classifications

- No common international classification for agricultural products in the world before CPC version 2.0 was approved by the 37th United Nations Statistical Committee in March 2006
    - ❑ The structure and list of items in **old CPC** was not suitable; as a result, it was not used by agricultural statistics.
    - ❑ **FAOSTAT Commodity List** had been used but was obsolete and needed to be updated.
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# FAO Proposal for CPC

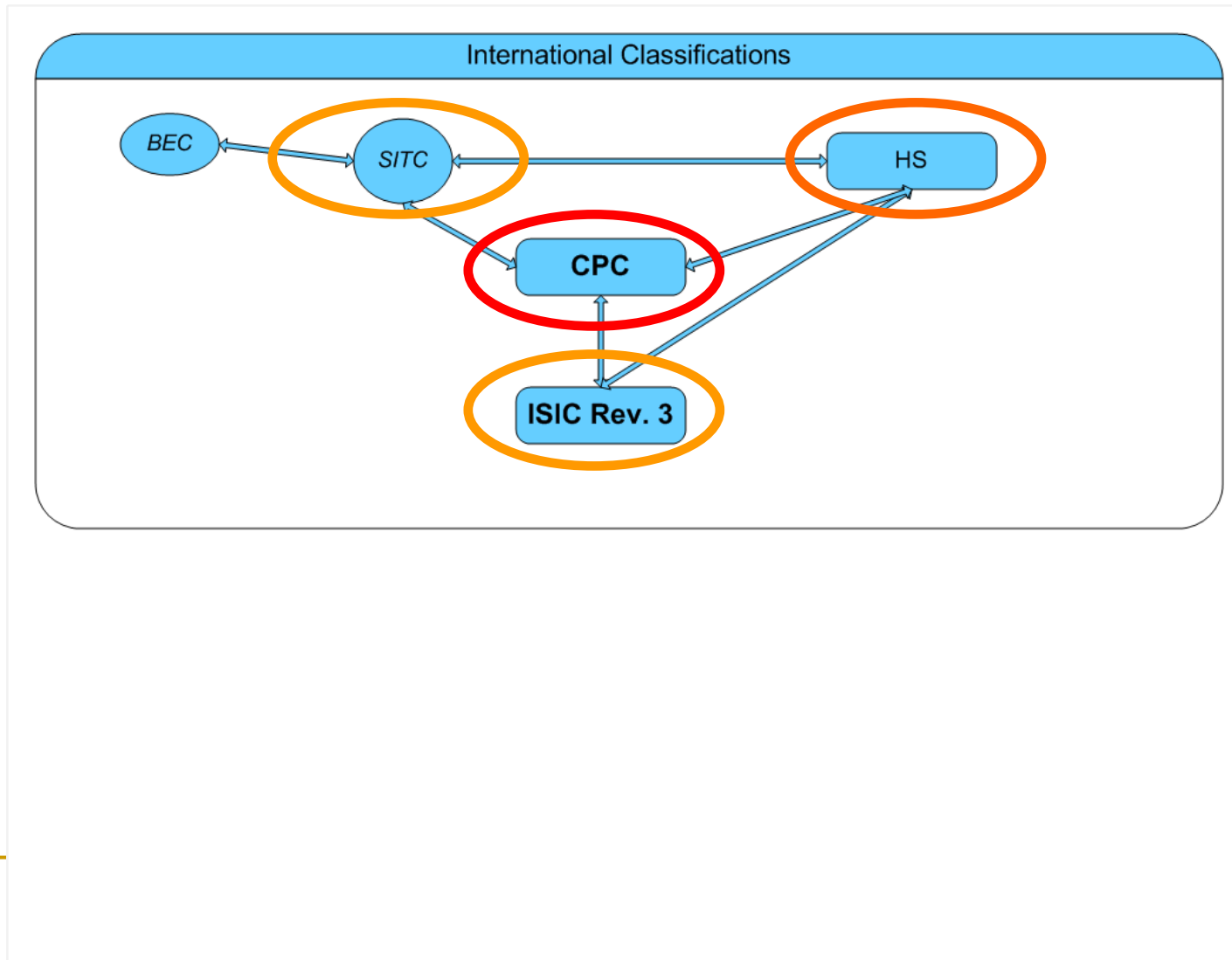
- The total number of items of agriculture at five-digit level in CPC v.1.1 is 221; in the new CPC v.2.0 is 506.
  - Among 506 items, half of them are HS-compatible items; the other half are with split HS codes which can be characterized into three groups:
    - Type I Commodities with high value of international trade (exceeds 50 millions of USD);
    - Type II Commodities with high volume of domestic production; *and*
    - Type III Seeds as distinctive products and important input for agricultural production.
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# Applying New CPC

- To *World Programme of Agriculture Census 2010, and*
  - To New “*FAOSTAT Data Collection Questionnaire.*”
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# Concerted Revisions

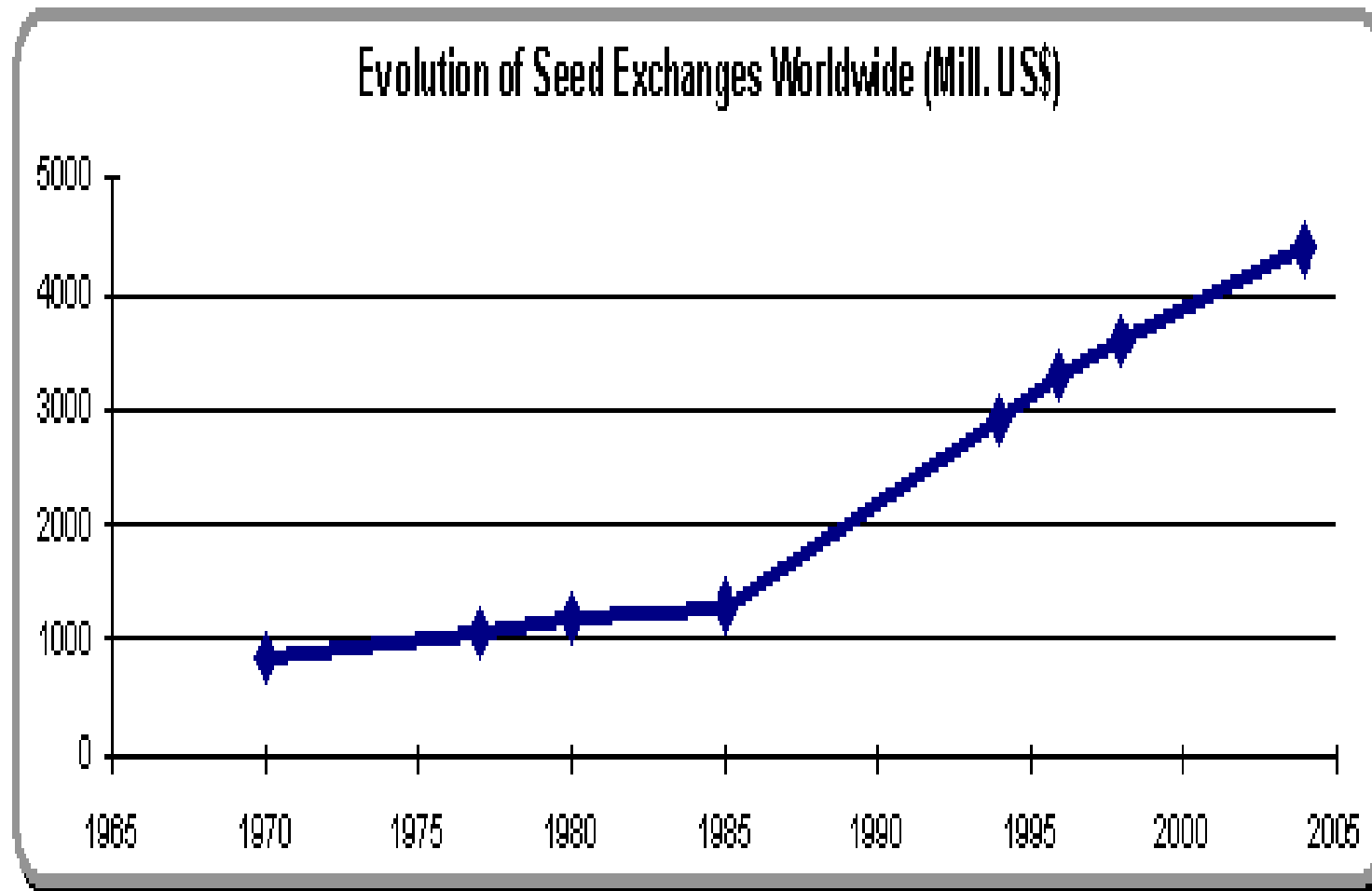


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# FAO Proposal for HS

- HS to play a more important role as the classification of food security data and agriculture (forestry and fisheries) statistics.
  - A better reconciliation of trade, production and consumption, and thus supply and demand of food data.
  - Improve consistency with other classifications (i.e. CPC).
    - These are the agricultural products that are deemed important and measured in terms of domestic production.
    - Their data have been compiled and disseminated in FAOSTAT and used by the agricultural research and policy-making community for more than 45 years.
    - They are typically combined in the HS with further processed forms of these products.
    - The new version of CPC (Central Product Classification) has taken a bold step to split the HS codes to obtain CPC subclasses meaningful enough in the context of domestic production.
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# Example: Seeds



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# Summary & Conclusion

- As an international classification, HS, is an important system and tool in defining the content and scope of data to be collected in tracking and monitoring the food insecurity in the world.
  - FAO Proposal for HS is compiled based on more than 40 years of FAO experience in collecting production and trade data of food and agricultural products in the fields and at the international level.
  - The purpose is to make the new HS not only to reflect better the reality and the needs of food and agricultural statistics and policy but also to make it more consistent with other international classifications.
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