

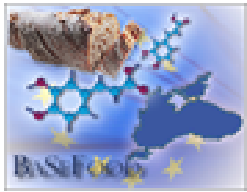


DIETARY DATA AND MORTALITY PATTERNS IN COUNTRIES OF THE BLACK SEA REGION

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behalf of the BaSeFood Black Sea area partners (<http://www.basefood-fp7.eu/>)

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Sustainable exploitation of bioactive components from the Black Sea Area traditional foods – **the BaSeFood project**

Collaborative research program funded by the EC 7th Framework Programme

Coordinated by the University of Bologna (*project Coordinator: Prof. Filippo D'Antuono*)

Participants: 13 European countries (Bulgaria, Georgia, Romania, Russian Federation, Turkey and Ukraine from the coastal nations of the Black Sea area)



Workpackage 1: Surveying, recording and describing traditional foods

Leader: Hellenic Health Foundation

Deliverable 1.2: *Report based on FBS, HBS and WHO data describing the dietary habits and the mortality patterns of the Black Sea Area Countries*

Available at: http://www.basefood-fp7.eu/dissemination/public_deliverables/

Material - Methods



- ❖ **Setting:** Six countries in the region (Bulgaria, Georgia, Romania, Russian Federation, Turkey and Ukraine)
- ❖ **Dietary data:** Food Balance Sheet (FBS) and Household Budget Survey (HBS) data of the early 2000s
- ❖ **Mortality data:** Standardized Death Rates (SDRs) for mortality by any cause, diseases of the circulatory system or cancer (WHO, *European mortality database* <http://data.euro.who.int/hfamdb>)
- ❖ **Additional data:** National Gross Domestic Product (GDP) (*IMF, World Economic Outlook Database*) and use of tobacco products (*WHO, Health for all database*)
- ❖ **Analysis:** Partial rank correlation coefficients estimated between overall and cause-specific mortality and each of four food groups, adjusting for the countries' GDP and use of tobacco products.

Dietary data



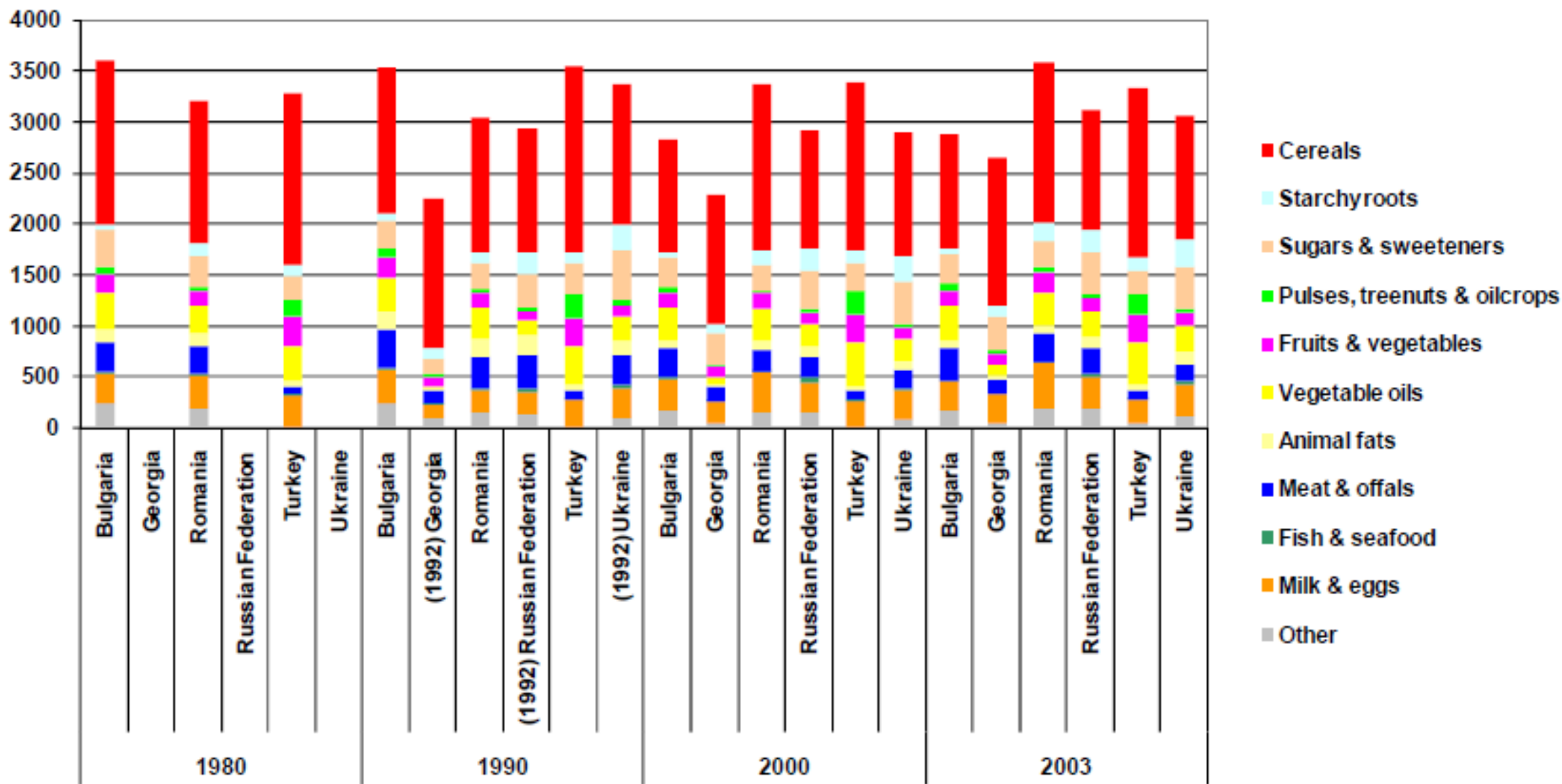
Food Balance Sheets

- ❖ Information on food supply at population level in terms of the major food commodities that are assumed to be available for human consumption in the country.
- Accuracy of data dependent on the reliability of the underlying basic statistics

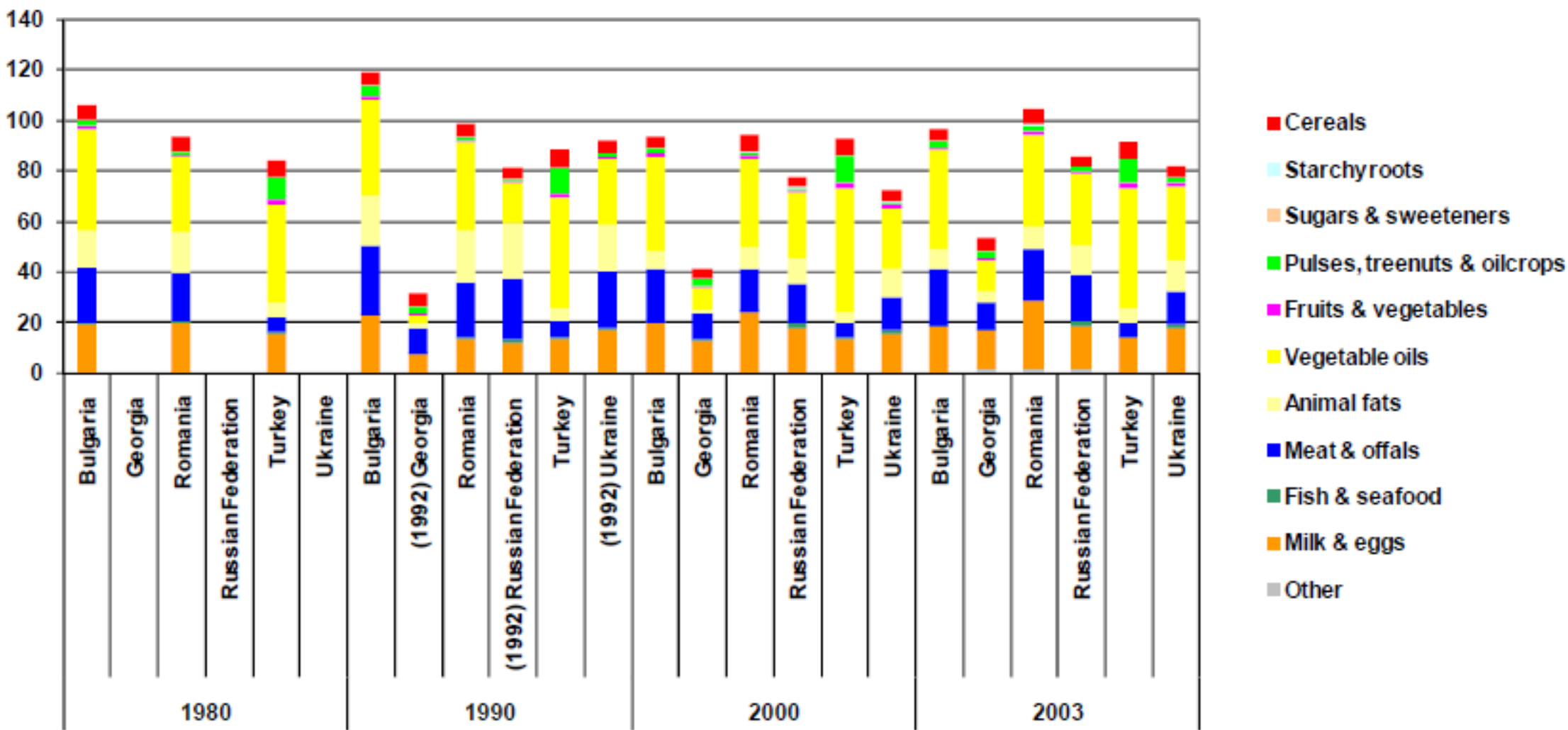
Household Budget Surveys

- ❖ Systematic collection of data on availability of foods in country representative samples of households
- ❖ Information on demographic and socio-economic characteristics available
- No records on eating out, food losses and waste, foods given to pets and meals offered to guests.

Sources of daily per person energy supply (kcal) per country and survey year



Sources of daily per person fat supply (g) per country and survey year



Source: Food Balance Sheets

<http://faostat.fao.org/site/368/default.aspx#ancor>

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SDRs for mortality overall and by major groups of causes (per 100000)

	All causes		Circulatory diseases		Cancer	
	1998	2008	1998	2008	1998	2008
Bulgaria	1255.91	995.39	813.14	611.28	158.49	173,1
Georgia*	915.25	894.43	648.57	475.96	97.42	102.83
Romania	1190.28	964.34	730.1	558.32	167.83	181.32
Russian Federation	1334.49	1300.52	722.05	724.24	194.9	180.41
Ukraine	1286.3	1308.09	745.71	781.39	174.74	158.23
<i>European region</i>	963.15	845.37	475.27	404.94	186.59	169.51

* Data available for 1998 and 2009
No data available for Turkey

Partial rank correlation coefficients* between mortality rates and Food Balance Sheet (FBS) or Household Budget Survey (HBS)-derived dietary variables, in countries of the Black Sea Region

	Total mortality		Mortality from diseases of the circulatory system		Total cancer mortality	
	FBS	HBS	FBS	HBS	FBS	HBS
Vegetables/legumes	-0.46	+0.70	-0.16	+0.89	+0.96	+0.05
Fruit (including juices)	-0.70	-0.03	-0.89	-0.33	-0.05	-0.72
Meat	+0.85	+0.70	+0.64	+0.89	+0.51	+0.05
Added lipids	-0.07	+0.37	+0.25	+0.64	+0.77	+0.43

*Adjusting for Gross Domestic Product and tobacco smoking expressed in number of cigarettes consumed per person per year.

Conclusions



- ❖ Cereal-based diet, including several sources of animal fat
- ❖ Vegetable oils have traditionally been consumed in the region
- ❖ Religious and cultural norms differentiate the type of meat consumed (pork meat was preferred in Bulgaria, Romania and Ukraine; poultry in Turkey; and, beef in the Russian Federation and Georgia)
- ❖ Household Budget Survey data state clearly the high dependence of diet on socio-demographic factors, including residential area, educational attainment and income
- ❖ Diseases of the circulatory system are the main cause of death in these countries, with rates being substantially higher to those of the European Union.



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