Importance of Food Consumption Data for Food Decision-Making

GFoRSS Food Regulatory Science Webinar Series
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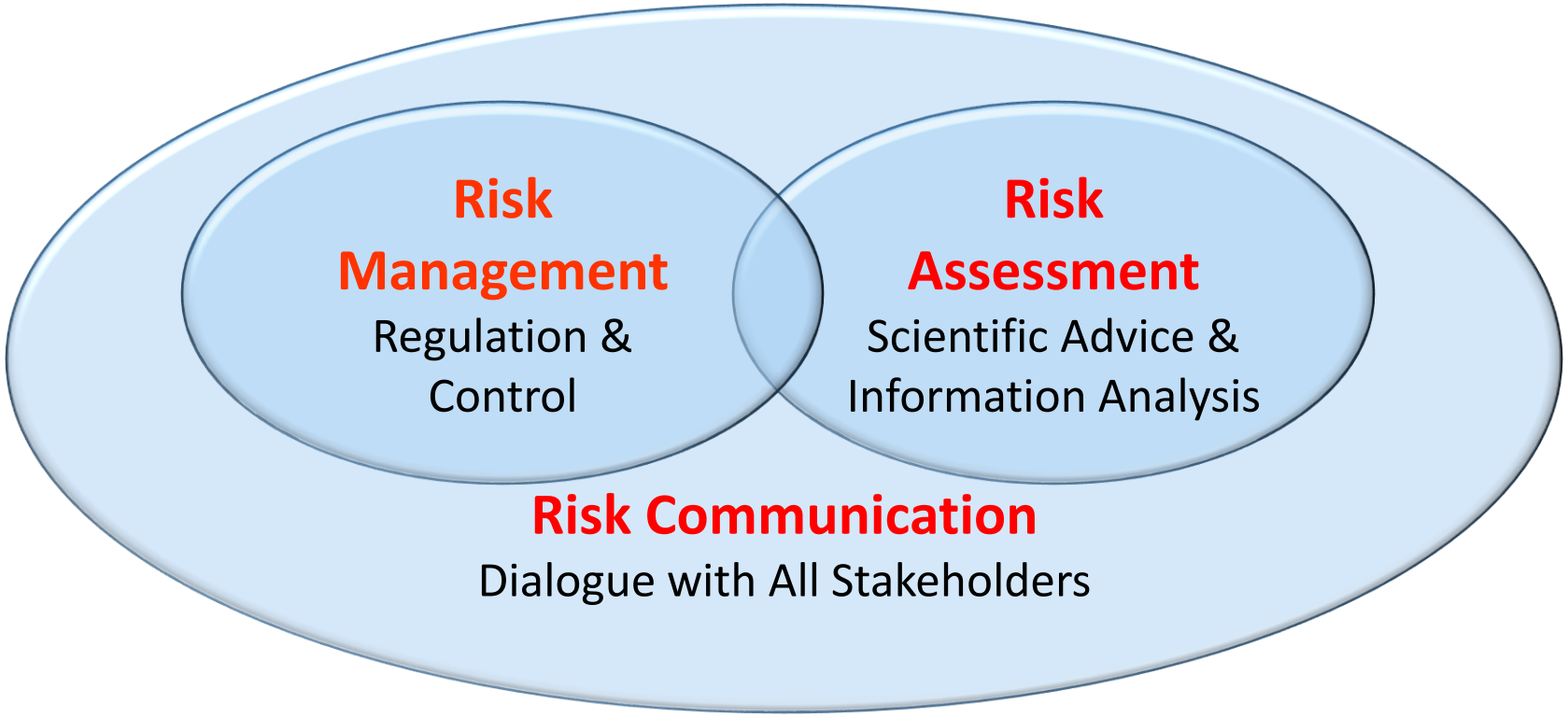
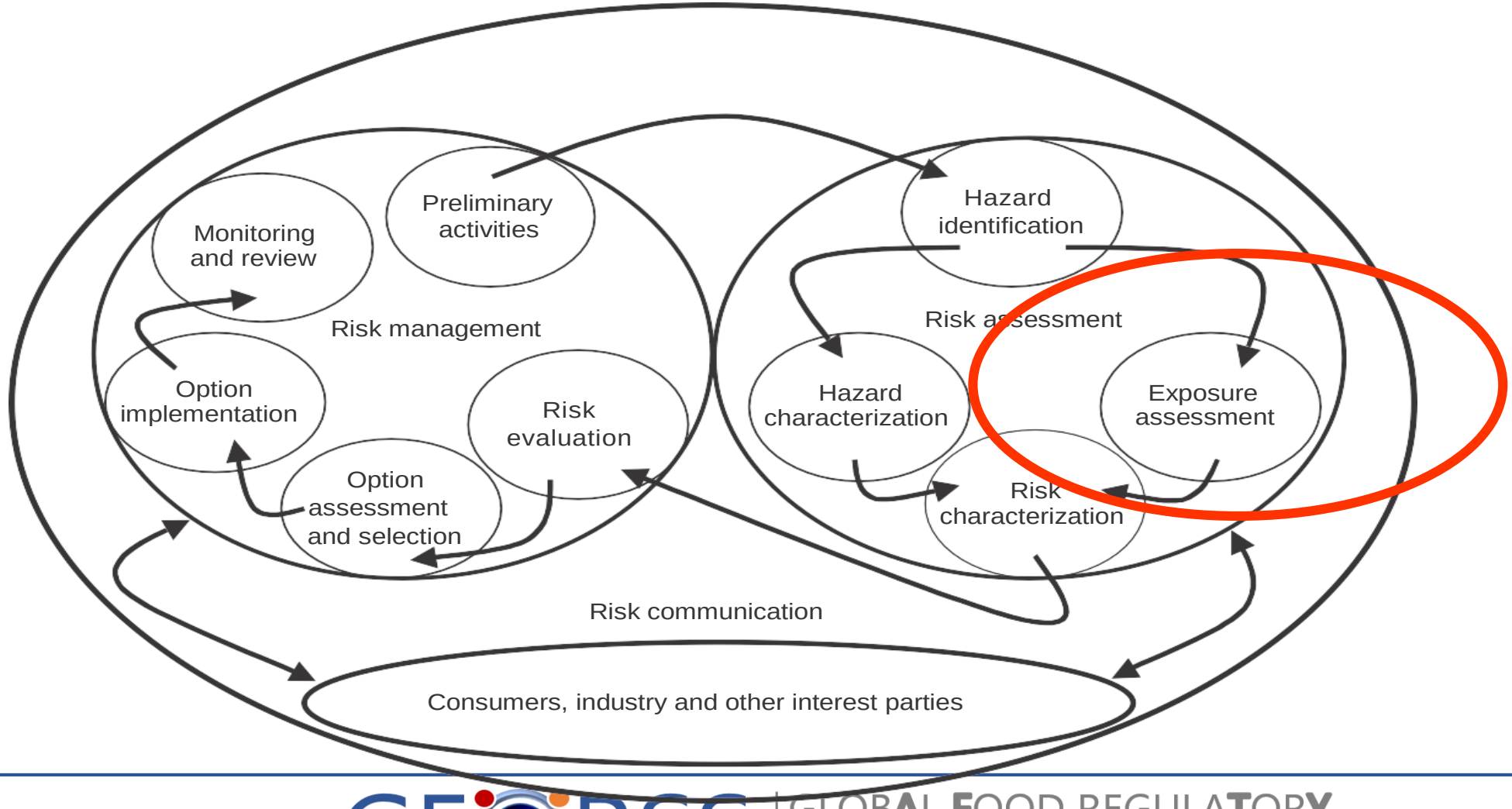
Robust Food Regulatory Decisions: Based on Risk Analysis

Key Pillars of a Robust Food Control System



Risk Analysis → Robust Food (Regulatory) Decisions

Continued Reliance on Risk Analysis for Food (Regulatory) Decision-Making

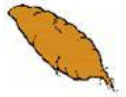
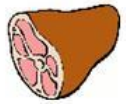


Dietary Intakes/Dietary Exposure Assessment

Occurrence of Food Chemicals

Food consumption

Dietary Intakes/Exposure Assessment

	Amount brought by each food		Amount Consumed (g/day)		Occurrence data (µg/g)	Body weight (kg)		Intake / Exposure (µg/kg/day)
Overall Diet		=	141,9	X	0,0093	/ 65	=	0,020
	+							
		=	198,4	X	0,0009	/ 65	=	0,003
	+							
		=	191,5	X	0,0076	/ 65	=	0,022
	+							
		=	541,4	X	0,0025	/ 65	=	0,021
	+							
		=	315,0	X	0,0007	/ 65	=	0,003
						Total	=	0,070 (µg/kg/day)

Stepwise Approach For Dietary Intakes/Dietary Exposure Assessments

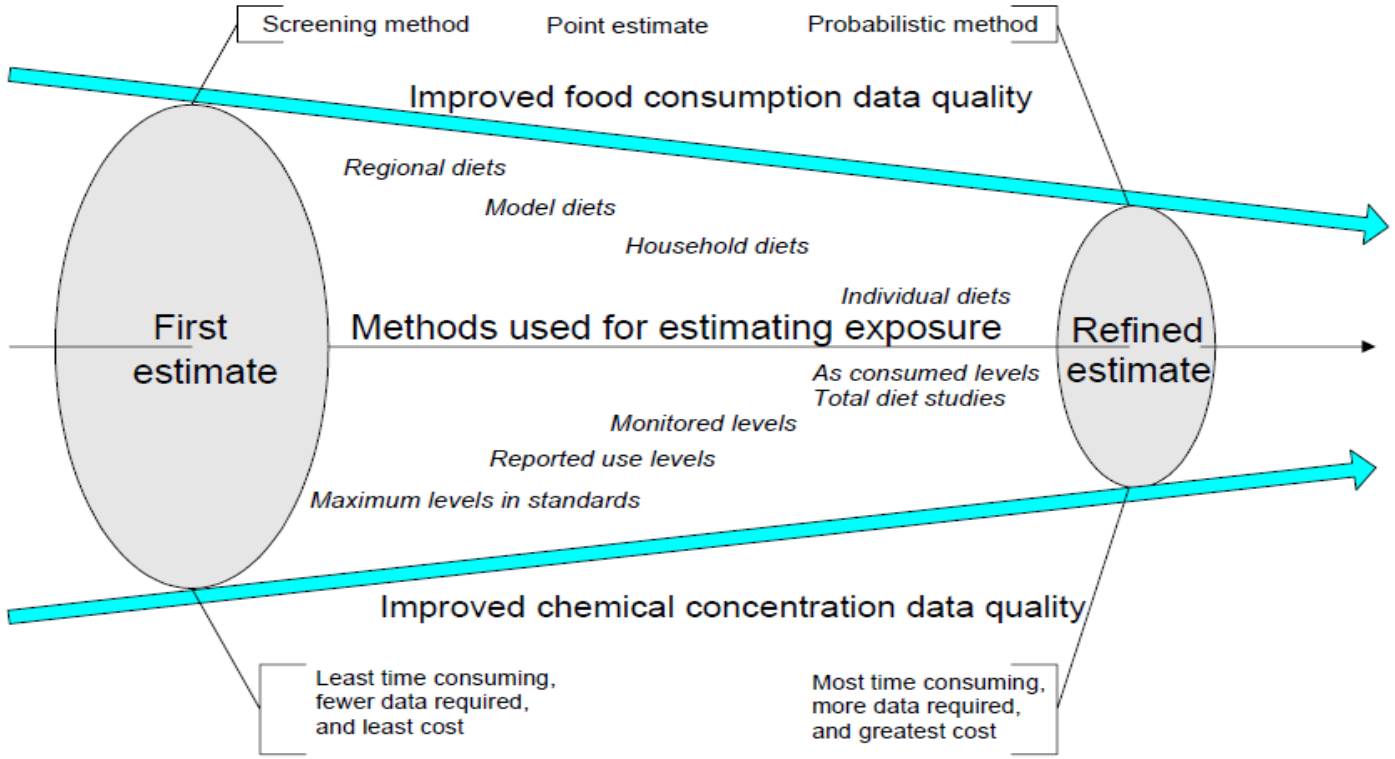


Figure 1 Stepwise approach to obtaining realistic dietary exposure assessments
Note: Data and methods selected from the right-hand side of the diagram are likely to result in a more realistic dietary exposure estimate or "refined estimate"; however, it may not be the "refined estimate" in terms of the "most appropriate" one to suit the purpose of a specific dietary modelling exercise.

Overview: Types of Food Consumption Data – Pros and Cons

Méthods	Data	Consumption Estimates	Food Chain Level	Drawbacks
Population-based methods	❑ Food Balance Sheets ▪ Total food available for consumption as a physical residual in the market. ▪ Total supply = total demand ❑ Time scale: year	❑ Median, mean	❑ Raw, semiprocessed products	❑ No information on distribution of consumption ❑ No information on individual exposure and subgroups at risk ❑ High level of uncertainty
Household-based methods: **Always available, generated on a regular basis by national institute of statistics**	❑ Purchase or expenditures records ▪ Values and quantities of food purchased, own produced and received at household level ❑ Large sample size ❑ Time scale: weeks	❑ Mean ❑ High Percentile	❑ Raw, semiprocessed and processed products	❑ No intra-household distribution ❑ Not individual food intakes ❑ Food eaten outside home difficult to capture
Individual-based methods	❑ Food record survey ❑ 24-hour recall survey ❑ Food frequency questionnaire ❑ Meal-based diet history survey ❑ Food habit questionnaire ➢ Small sample size ➢ Time scale: days	❑ Mean ❑ High percentile	❑ Raw, semiprocessed and processed products	❑ Expensive, time and resource consuming ❑ Susceptible of under- or over reporting

Continued Efforts …. Concerted Action