

Nanotechnology in the Food Chain

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Communication, perception and participation of consumers

- There has been little, if any, communication or participation of consumers, because
- “There are no nano-particles in the food chain” to quote various industry representatives
- The new regulations for novel foods and manufactured nano-particles may well change that position, but ----
- However, there are embryonic public perceptions

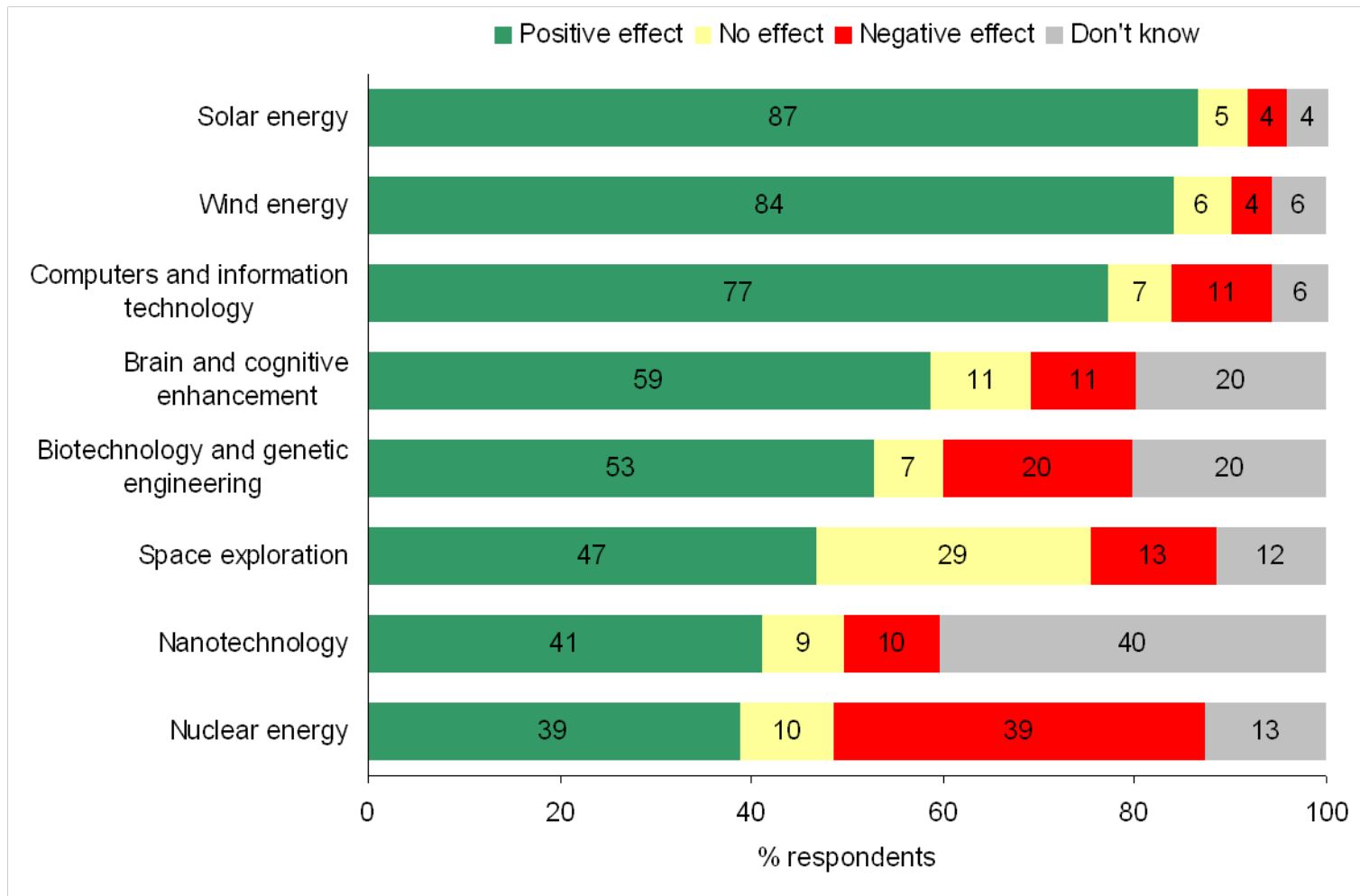
Sources

- Two recent Eurobarometer surveys conducted in 2010
- The Eurobarometer is a representative sample survey of adults in all the EU Member States.
- Life Sciences and Biotechnology (DG Research)
 - Questions on nanotech in general and nano-particles in household products
- Food Risks (European Food Safety Authority)
 - Questions about food risks
 - One question on nano-particles in food
- And from social scientific research on risk, food and other issues of relevance

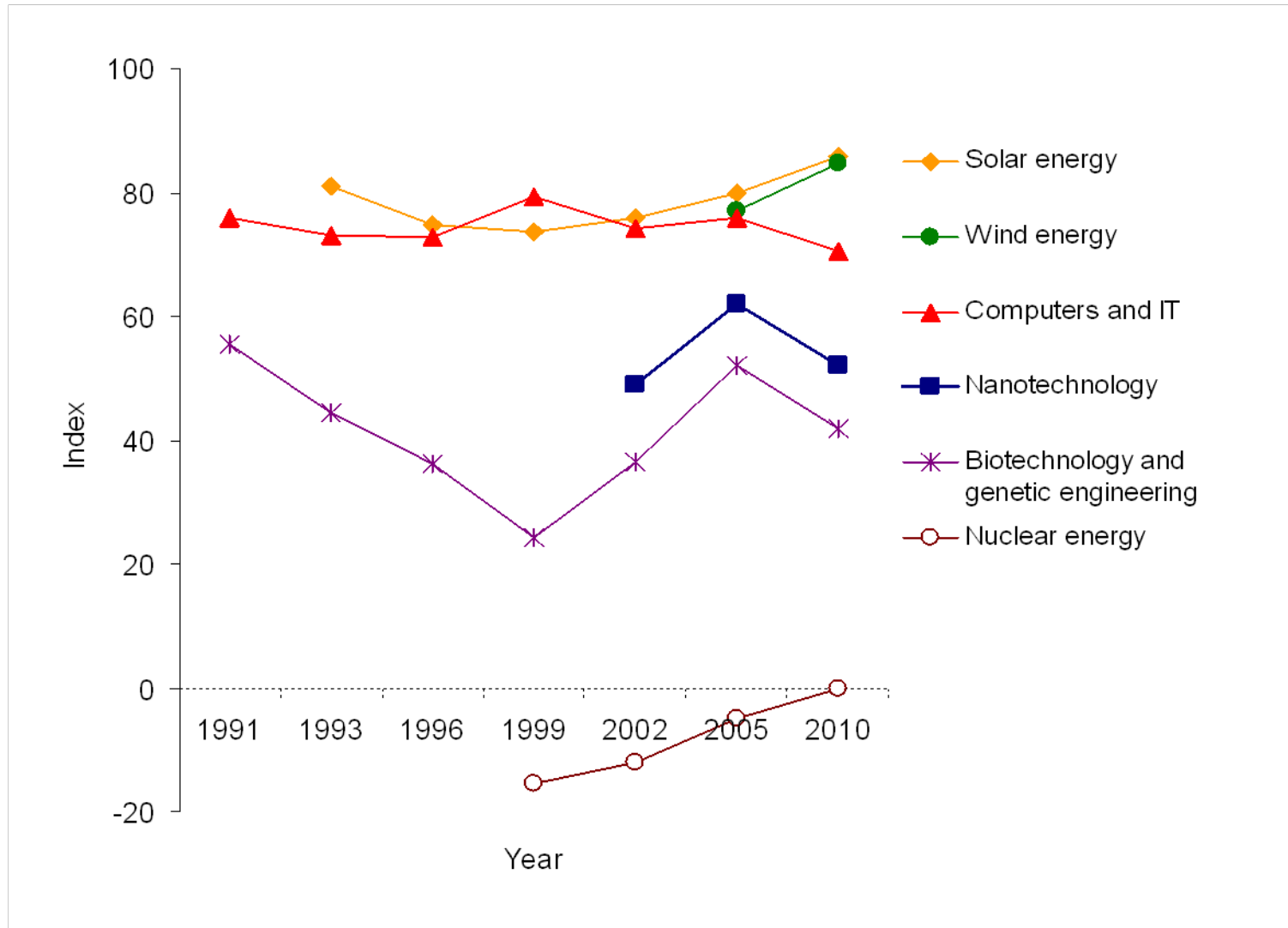
EB Life Sciences and Biotechnology

- A set of items that measure technological optimism
- Will the technology improve our way of life, make it worse or make no difference?
- Nanotechnology stands out as the most unfamiliar technology with 40% Don't Know responses

Optimism and pessimism regarding eight technologies, EU27



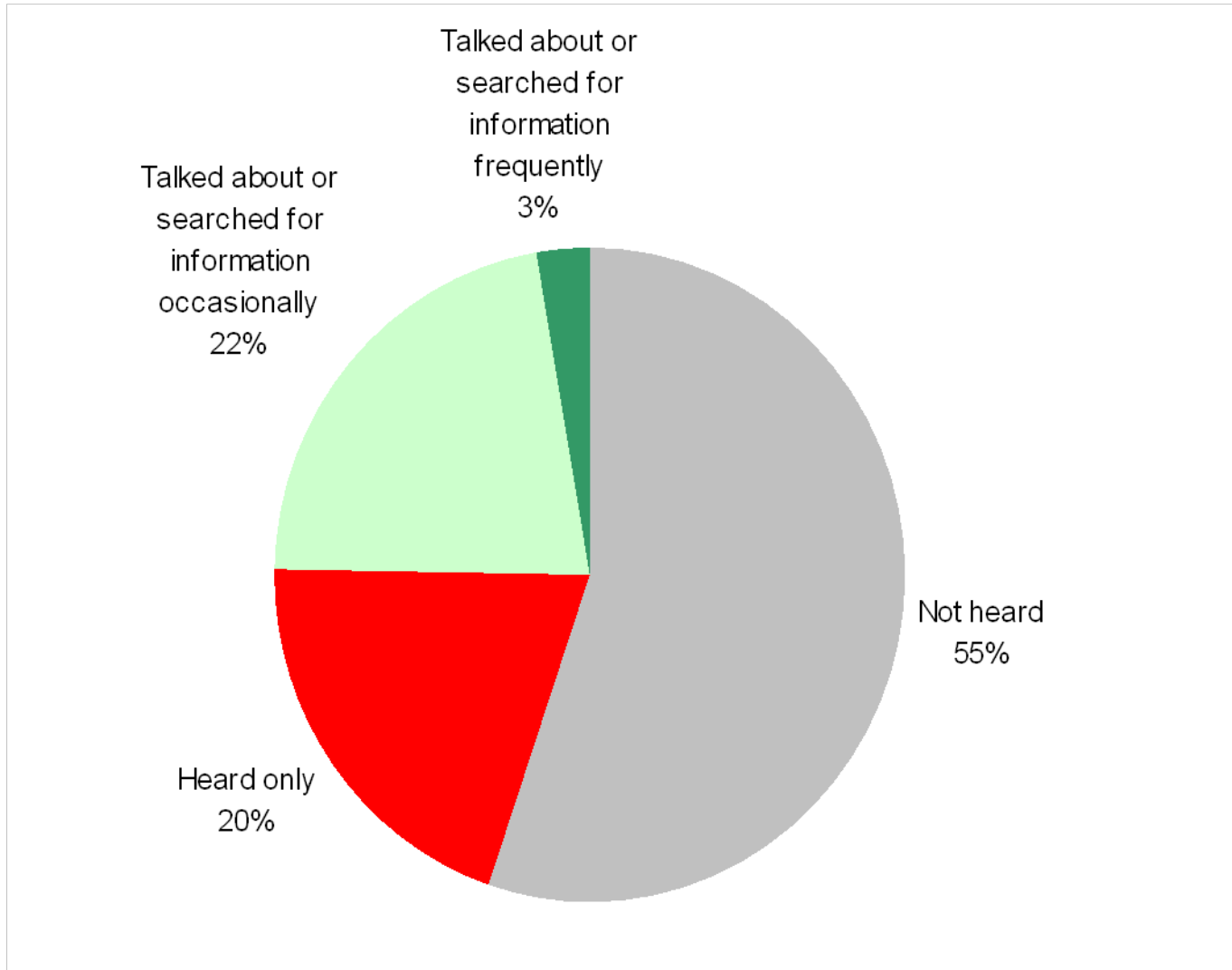
Index of optimism about technologies, 1991-2010 trends



Specific focus on nanotech

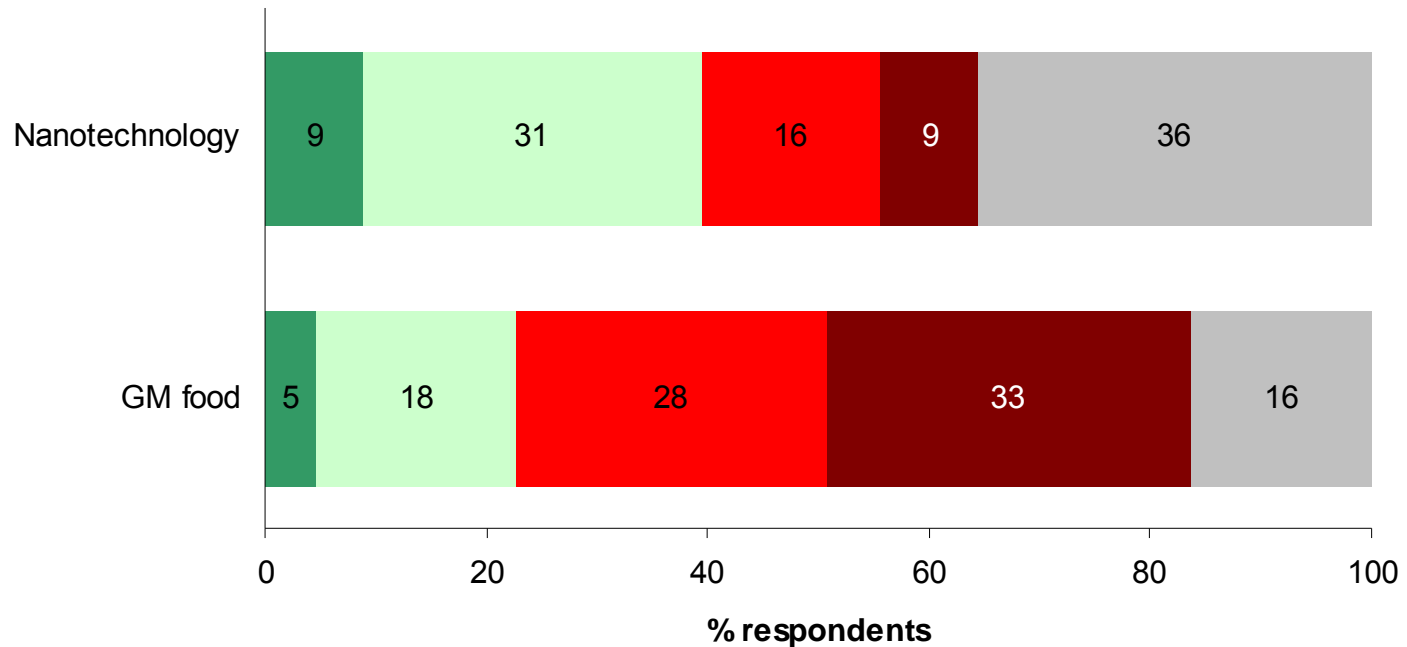
- **And now thinking about nanotechnology: Nanotechnology involves working with atoms and molecules to make new particles that are used in cosmetics to make better anti-aging creams, suntan oils for better protection against skin cancer and cleaning fluids to make the home more hygienic. Despite these benefits, some scientists are concerned about the unknown and possibly negative effects of nano particles in the body and in the environment.**
- Have you ever heard of nanotechnology before? If yes, have you
- Talked about nanotechnology with anyone before today?
- Searched for information about nanotechnology?

Awareness of nanotechnology for household products, EU27

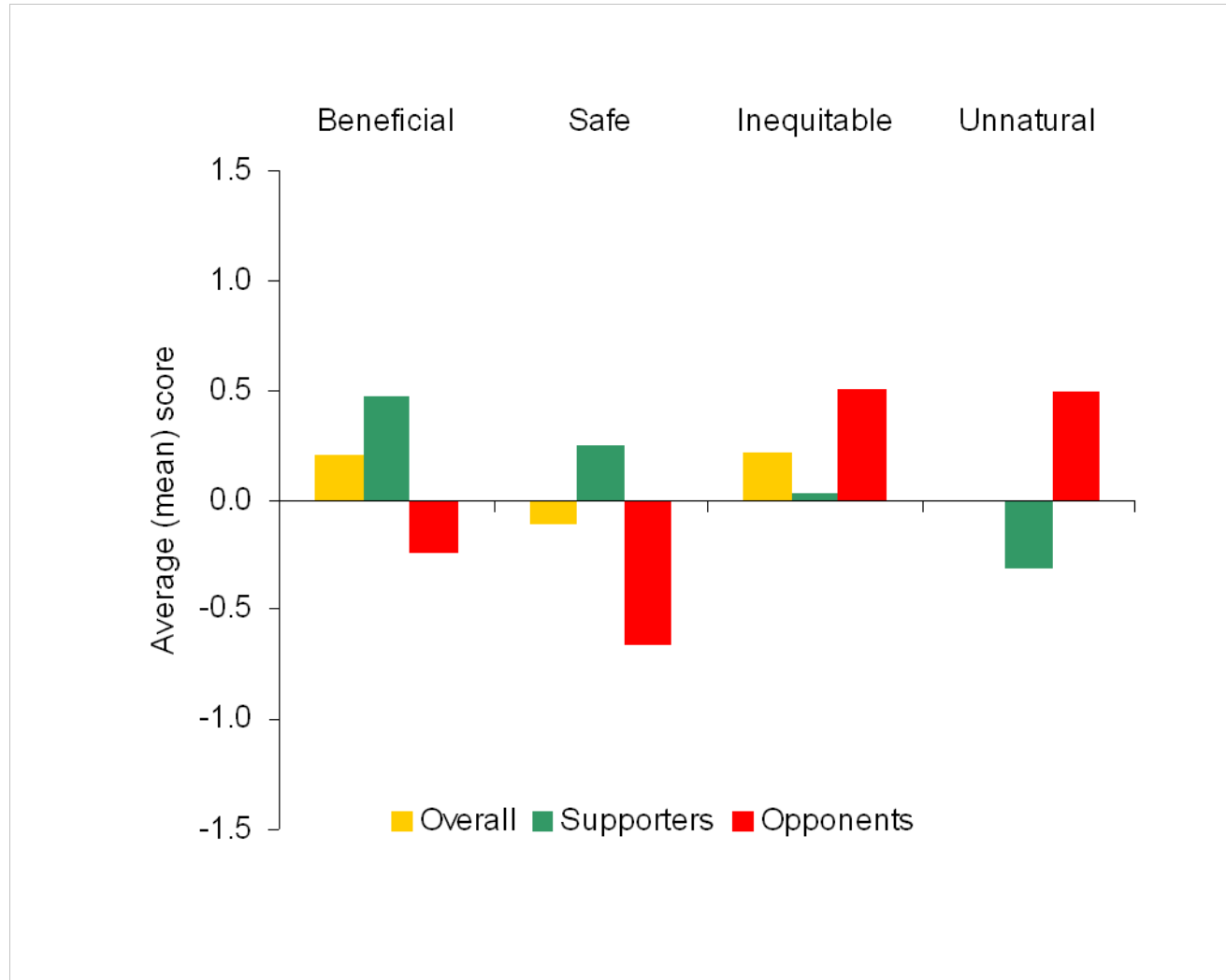


Support for nanotechnology in household products, EU27

■ Totally agree ■ Tend to agree ■ Tend to disagree ■ Totally disagree ■ Don't know

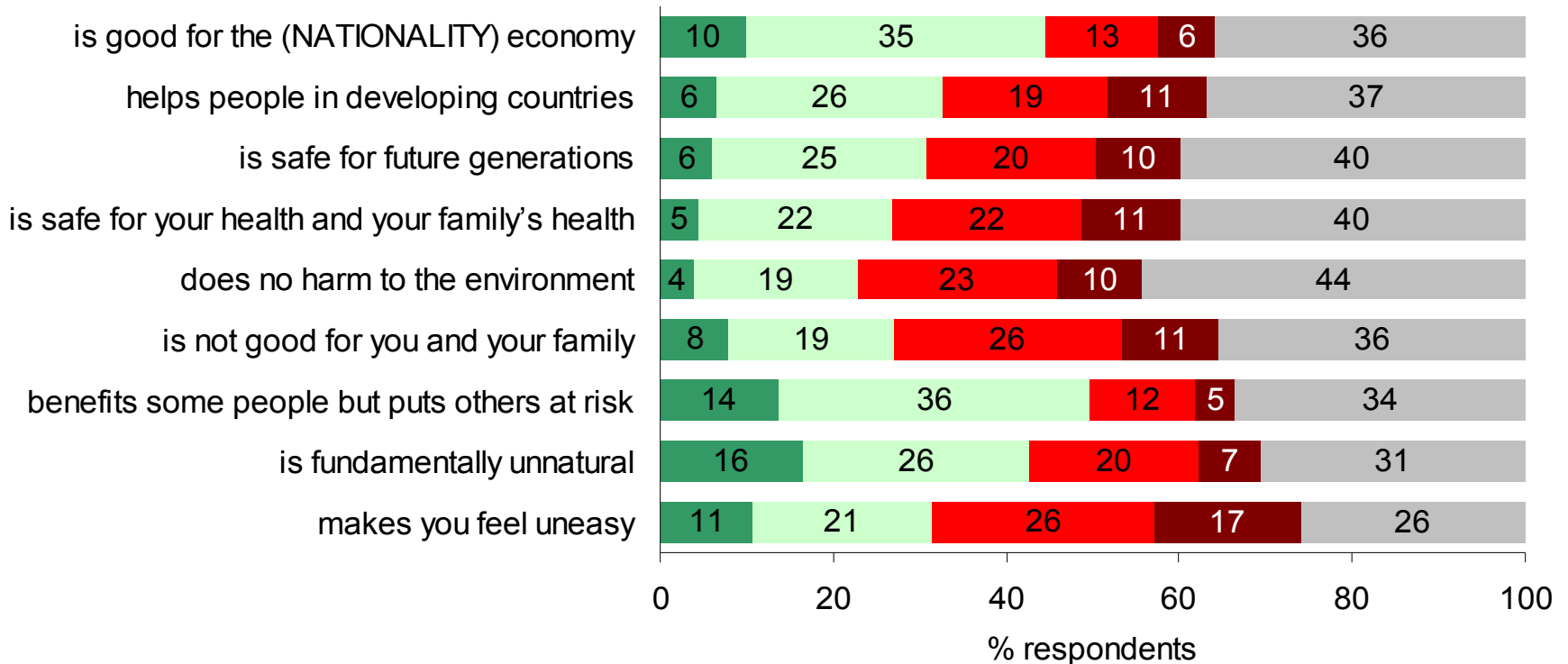


Perceptions of nanotechnology as beneficial, safe, inequitable and unnatural, EU27 (excluding DKs)



Nanotechnology in consumer products, EU27

■ Totally agree ■ Tend to agree ■ Tend to disagree ■ Totally disagree ■ Don't know



Food risks

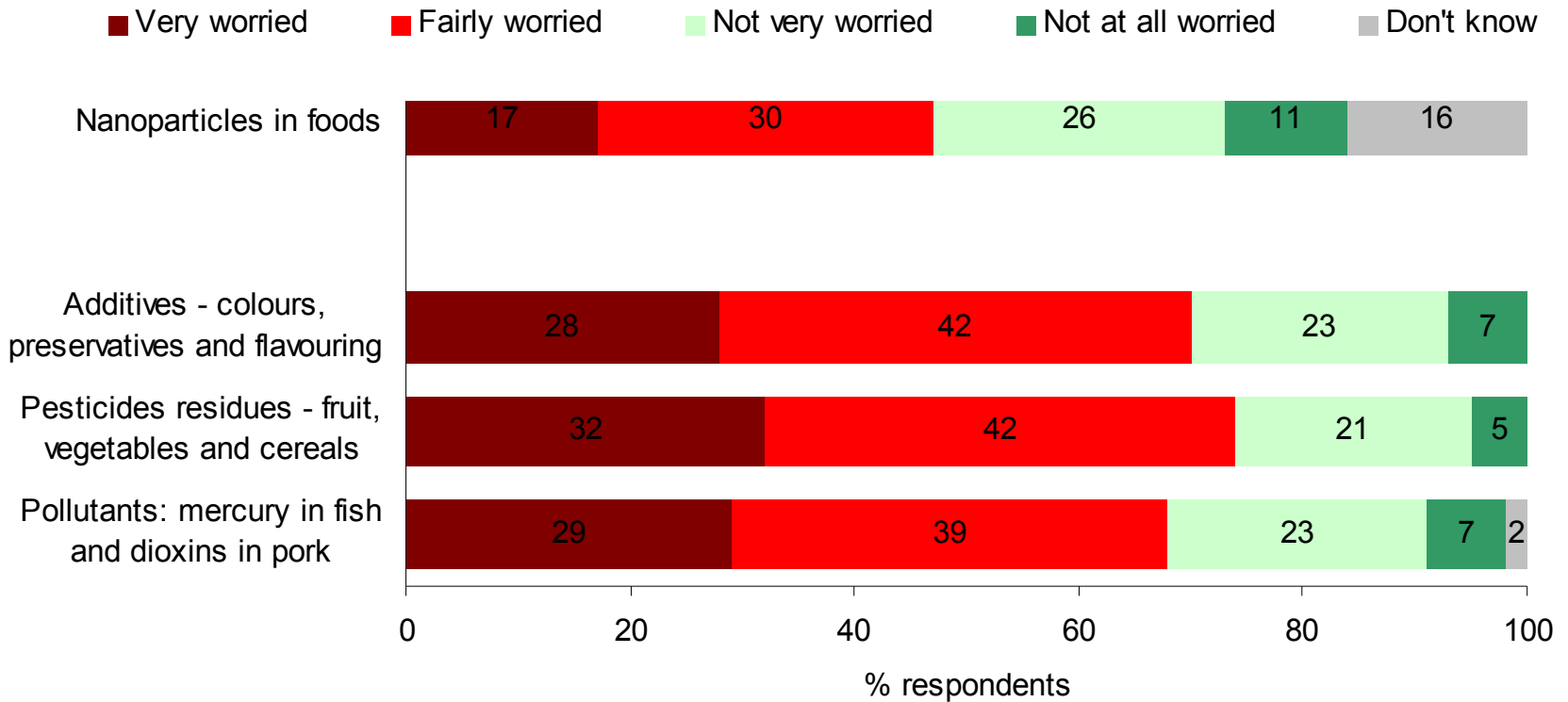
- A history of recent crises
 - BSE in cattle
 - Dioxin in chickens
- Food is not just another random consumer product; its origins, preparation and consumption define identities, social position and the good/healthy life
- Recent trends in favour of slow, local, organic, home cooked and natural.
- The consumption of convenience foods is increasing, but this brings anxieties to many consumers

Food: anxious Europeans

To what extent do you associate food and eating?	To a large extent	Somewhat	Not very much	Not at all
With concerns about the safety of food	37%	42%	16%	5%

How likely you think it will happen to you?	Very likely	Fairly likely	Not very likely	Not at all likely
The food you eat damaging your health	11%	37%	40%	9%

Food worries: Food Risk Eurobarometer



Summary

- A restricted appreciation of consumer perceptions of nanotechnology and food
- Awareness of nanotechnology is limited
- No general rejection of nanotechnology in household products but the views of opponents views are more extreme than those of supporters
- Food risks are a particular (and growing?) sensitivity in Europe
- Will nano-particles be 'anchored' or understood in terms of benefits (what benefits) or another source of anxiety like chemicals, additives, residues and pollutants?

Communication

- If nano-particles are to enter the food chain, then
- Early, transparent and balanced communication is advised
- Keeping the issue quiet to avoid controversy is the road to eventual public suspicion, distrust and rejection
- Any uncertainties about toxicological impacts will have an important bearing on public perceptions
- Uncertainties will need to be counter-balanced by real benefits – consumers are utilitarians at heart.
- Social science, as with cloning animals for the food chain, can act as a predictor/observatory of trend in consumer perceptions.