

An Anthropological Perspective on Risk Perception and GM Crops


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The study of risk: getting the terminology right

- **Hazard:** “The forces, conditions, or technologies that carry a potential for social, infrastructural, or environmental damage.”
- **Risk:** “The potential harm that may arise from a hazard event.”
- **Disaster:** “The impact of a hazard event on life, property, livelihood, or environment.”


The rise of the “risk society”

- With economic development, society’s concern shifts from **wealth distribution to risk distribution** (Beck 1992).
- Risk distribution and risk awareness are both functions of **modernization**. Why?
- Watershed events in the risk society
- With modernization, the **magnitude of risks is amplified**. How?



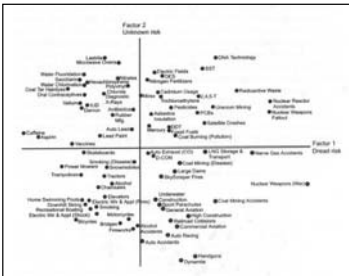
Risk distribution

- “**Risk positions**”
- **Vulnerability:** “The characteristics of a person or group that influence their capacity to anticipate, cope with, resist and recover from the impact of a hazard” (Wisner 2004)




Approaches to the study of risk perception

- **The psychological approach**
- What cognitive factors drive risk perception? (Slovic 2000)



Approaches to the study of risk perception


- **The cultural approach**
- “The same pollutants can have quite different meanings for different people” (Beck 1992).
- “Risk perception and assessment are grounded in the cultural norms and values that govern the relationships that human communities have with their physical and social environments” (Oliver-Smith 1996).



The cultural approach to studying risk perception


A Case From Rural China

Case study site: Futian Township, Sichuan Province



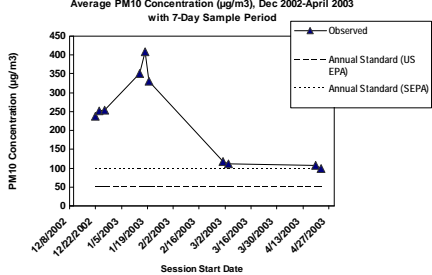
Study methods

- Phase 1: Identify locally salient risks from pollution (semi-structured interviews, n=36)
- Phase 2: Rating the risks (standardized survey, n=122)
- Air and water quality monitoring



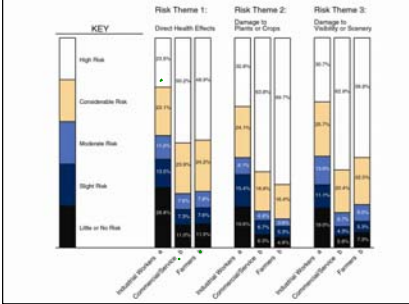
Air quality in Futian (particulate matter)

Average PM10 Concentration (µg/m³), Dec 2002-April 2003
with 7-Day Sample Period



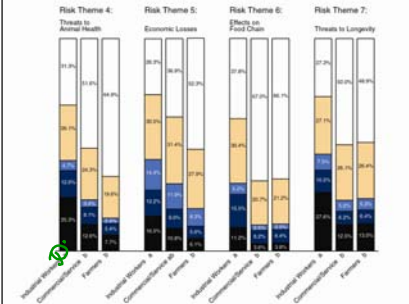
Session Start Date	Observed (µg/m ³)	Annual Standard (US EPA) (µg/m ³)	Annual Standard (SEPA) (µg/m ³)
12/8/2002	250	150	100
12/22/2002	250	150	100
1/5/2003	350	150	100
1/19/2003	400	150	100
2/2/2003	300	150	100
2/16/2003	120	150	100
3/2/2003	120	150	100
3/16/2003	120	150	100
3/30/2003	120	150	100
4/13/2003	120	150	100
4/27/2003	120	150	100

Rating the risks



Risk Theme	Sub-theme	High Risk	Considerable Risk	Moderate Risk	Slight Risk	Little or No Risk
Risk Theme 1: Direct Health Effects	Industrial Wastewater	20.0%	30.0%	30.0%	15.0%	5.0%
	Community Wastewater	20.0%	30.0%	30.0%	15.0%	5.0%
	Farmers	20.0%	30.0%	30.0%	15.0%	5.0%
Risk Theme 2: Damage to Plants or Crops	Industrial Wastewater	20.0%	30.0%	30.0%	15.0%	5.0%
	Community Wastewater	20.0%	30.0%	30.0%	15.0%	5.0%
	Farmers	20.0%	30.0%	30.0%	15.0%	5.0%
Risk Theme 3: Damage to Livability or Scenery	Industrial Wastewater	20.0%	30.0%	30.0%	15.0%	5.0%
	Community Wastewater	20.0%	30.0%	30.0%	15.0%	5.0%
	Farmers	20.0%	30.0%	30.0%	15.0%	5.0%

Rating the risks (continued)



Risk Theme	Sub-theme	High Risk	Considerable Risk	Moderate Risk	Slight Risk	Little or No Risk
Risk Theme 4: Threats to Animal Health	Industrial Wastewater	20.0%	30.0%	30.0%	15.0%	5.0%
	Community Wastewater	20.0%	30.0%	30.0%	15.0%	5.0%
	Farmers	20.0%	30.0%	30.0%	15.0%	5.0%
Risk Theme 5: Economic Losses	Industrial Wastewater	20.0%	30.0%	30.0%	15.0%	5.0%
	Community Wastewater	20.0%	30.0%	30.0%	15.0%	5.0%
	Farmers	20.0%	30.0%	30.0%	15.0%	5.0%
Risk Theme 6: Effects on Field Crops	Industrial Wastewater	20.0%	30.0%	30.0%	15.0%	5.0%
	Community Wastewater	20.0%	30.0%	30.0%	15.0%	5.0%
	Farmers	20.0%	30.0%	30.0%	15.0%	5.0%
Risk Theme 7: Threats to Livability	Industrial Wastewater	20.0%	30.0%	30.0%	15.0%	5.0%
	Community Wastewater	20.0%	30.0%	30.0%	15.0%	5.0%
	Farmers	20.0%	30.0%	30.0%	15.0%	5.0%

Conclusions and Implications

- Understanding the cultural, political and economic context of an issue. People do not make risk judgements in a vacuum, but rather within the context of what they know and experience.



Brainstorming Activity

- Now that you've made it most of the way through this course, can you identify the important risks associated with GM foods? *To whom* does this technology pose a threat?
- What factors may drive risk perception related to GM foods?
- Does risk perception matter? Does it influence policy? Should it?