Perception of Water Quality and Health Risks in the Rural Area of Medellín (Colombia)
M.Sc. Luisa F Roldán Rojas (luisa.rojas2@kit.edu), Dr. phil. Andreas Megerle (andreas.megerle@kit.edu)

Introduction and Methods

In Latin America and the Caribbean approximately 50 million people lack basic access to drinking water, most of them living in rural areas. Also affecting metropolitan areas, this uneven spatial distribution of drinking water supply poses a permanent public health risk. Often coinciding with a low economic productivity and poor prosperity, uneven spatial distribution of drinking water contributes to the enforcement of regional disparities. The example cases of three rural quarters of Medellín (San Cristóbal, Altavista and San Antonio de Prado) show how the perception of water quality and health risks by different social groups can influence the implementation of drinking water systems and the success of health campaigns. A social area analysis was carried out to determine the socio-economic framework of the study. The data base consists of 125 face-to-face interviews with drinking water users and additional expert interviews.

Results

General Perceptions and Behaviour

- Drinking water utilities’ fees are expensive
- 83% of respondents do not regularly boil the water before drinking or using it
- “Drinking water” defined as “treated water” and “pure/clean water”
- Raw water quality perceived as acceptable and consumption-related health risks as low

Risk Perceptions

- No risk perception: Waterborne diseases are not linked to raw water consumption
- Environmental problems caused by contaminated raw water are ignored
- Pollution of water streams through waste water and agriculture
- Drinking water supply seen as a factor to improve health and quality of life
- High level of trust in the drinking water utilities

Discussion and Conclusion

General Perceptions

- Organoletic properties strongly influence perceived water quality:
  - Appearance of drinking water and bottled water is assumed as drinking water standard.
  - When raw water’s appearance meets the drinking water standards, it is mistaken for drinking water.
- The perception of water quality also seems to be influenced by the knowledge of the drinking water definition disseminated by official campaigns, as well as by the individual perception of health risks.

Risk perception

- Raising awareness of waterborne diseases is a key objective of health education
- Consumers have an insufficient perception of the link between raw water consumption and health risks.
- Raw water consumption reflects a lack of knowledge on health risks posed by invisible microbes in raw water and on drinking water treatment.
- To promote risk-conscious water consumption, the knowledge on waterborne health risks is more significant than individuals’ perceptions of water quality.

Conclusion

The implementation process of drinking water systems must consider the target groups’ perceptions and their socioeconomic (ex.: limited financial funds) and cultural contexts. A perception analysis prior to the implementation could contribute to integrate these requirements into the implementation process and increase its chances of success.

References