Life on the margins: the Gobi Desert

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Completing Geographical Research - Qualitative & Quantitative Research

Qualitative Research:
• Non numeric field work
• Field work methods include extended interviews, field work observations and focus groups.
• Although there will be pre set aims and questions an interviewer will want to ask; they may adapt their questioning according to the responses given.
• More typically used in human geography.

Quantitative research:
• Numerical research where data can typically be graphed and sometimes analysed statistically.
• Dr Sternberg used local climate data in China to aid his research.
• Field work methods are likely to be more technically scientific e.g. the collection of rainfall data over time using rain gauges in various locations.
Qualitative & Quantitative Data – Pros & Cons.

‘A longer time frame gives a chance for trust to develop and the confidence to go into more depth.’

Quantitative data that covers wide geographical areas can is often available through organisations such as local/central governments (e.g. The UK population census).

A set of climatic data from a number of different locations and from the last 30 years allows the researcher to compare trends clearly over time and apply statistical correlation tests.

‘An extended interview gives the respondent the time and freedom to express thoughts and ideas that may not fit into a questionnaire’.

‘A limitation is the time involved. Sometimes the answers may wander from the question or occasionally the person does not have a lot to say’.

Good connections & interpreters are vital.

Often relies on expensive and reliable equipment.

Sometimes discussions may touch on issues that are controversial – an interviewee may shy away from discussing particular topics.

Source: Quotes from Dr Troy Sternberg. Also more general statements.
Location of the 3 field work sites, all in the Gobi Desert:
i) Omnogov & Dundgov provinces in **Mongolia**.
ii) Minquin County in **China**.
iii) Xilingol County in Inner Mongolia, **China**.
A day in the life

Minqin County
Working with researchers in China:
Xilingol, Inner Mongolia
Mongolia
Growing settled housing in Mongolia
A water well in Mongolia
Research methods

- Hypothesis – your research question
- Literature review – what is known, written
- Fieldwork – research where, why, how, when
- Write up

Research
- Climate documentation
- Water resources – river, groundwater, aquifer, quality
- Sand, dust, wind, soil, plants
- Interviews – farmers, herders, officials, experts
- Politics, economics
Peer review
articles, books, conferences

What makes research science?

- Review by experts in the field of study
- Validate or reject hypothesis
- Difference between ‘I read it on the internet’ and ‘scientific research shows’
- Repeatable, robust investigation – answers one question, inspires new ideas

Peer review

- Submit paper to journal
- Refereed by 2-7 experts
- Revisions or reject – send comments on weaknesses
- Author(s) revises or drops paper
- Process takes 6 months – 2 years
Commentary

Chinese drought, bread and the Arab Spring

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Abstract

In 2011 winter drought in eastern China's wheat-growing region had significant implications beyond the country's borders. Potential crop failure due to drought led China to buy wheat on the international market and contributed to a doubling of global wheat prices; the resultant price spikes had a serious economic impact in Egypt, the world's largest wheat importer, where bread prices tripled. Quantifying the 2011 drought in China's wheat region with the Standard Precipitation Index identified extreme drought across the region that peaked in January 2011. Findings document the spatial extent and severity of the drought as the most serious on record and explain China's efforts to minimize the 2011 drought's domestic impact. The country's mitigation efforts had repercussions in Egypt where high food prices were a contributory factor to civil unrest. Tracking the drought – wheat price rise – protest trajectory suggests the potential direct and indirect links between natural hazards, food security and political stability at local and global scales.

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