



RESOURCE EFFICIENCY IN URUMQI (China)

ACTION BRIEF

CODE: URU-AB11

HOUSEHOLD SURVEY ON DEALING WITH ENERGY, WATER AND WASTE

TOPICS:
RESOURCES

CHALLENGE

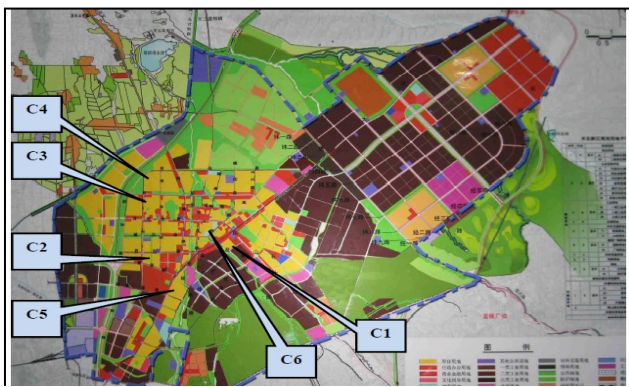
The key infrastructure areas of energy, water, wastewater and waste are counted among the many challenges to be addressed by urban management in fast growing megacities such as Urumqi and also form the focus of the RECAST Urumqi project. In order to adequately meet these challenges, a reliable basis of data on the areas mentioned above is essential. The geographical area of examination of this research comprises the former towns of Miquan and Dongshan, which now together form the administrative district of Midong, which lies to the north-east of Urumqi. With 108 m², Midong is home to

the largest industrial area in Western China. In the future, the city is likely to become the industrial centre not only of Urumqi but also of the state of Xinjiang. The merging of two administrative districts, which were previously under the control of separate governments, who favoured widely differing approaches to solve similar problems, led to a poor quality of heterogeneous and thus highly incompatible data, which created additional problems for Midong. In this respect, the creation of a homogenous and high-quality data basis is of great importance to Midong.

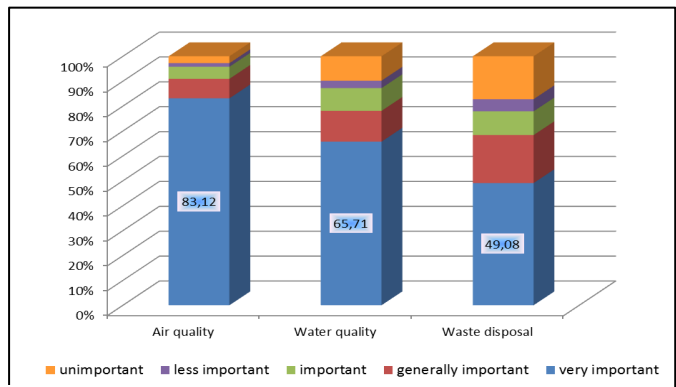
ACTION

IUWA carried out a household survey on the behaviour and awareness of private households in relation to the areas of energy, water and waste. The household survey was carried out in six parts, corresponding to the six new districts of Midong (see map), which previously belonged to Miquan and Dongshan. The corresponding questionnaire was designed by IUWA in close cooperation with our Chinese partners, to ensure that it clearly fit the local milieu. In preparation for the face-to-face interviews that formed the basis of the survey, the Chinese interviewers were first required to take part in capacity building training over several days. The questionnaire itself consists of approx. 70 questions (open and closed), which are divided into seven sections. In addition to the key topics of waste, wastewater and energy, the questionnaire

also contains questions on the living environment and situation of participants, their personal awareness and perception of environmental problems and also any recommendations or suggestions they might have in this context. The section on waste contains questions on opportunities for recycling, refuse bins, types of disposal and waste fees. Suggestions for waste disposal and how they are rated is also covered in this section. The central questions of the section on water relate to water quality, origin, consumption quantities and costs. Continuing in this vein, the questions on energy relate to usage levels and costs, types of energy used, heating patterns and energy saving measures. The questionnaire concludes with suggestions for the improvement of diverse environmentally relevant areas.



Chosen districts in Midong: C1=Dipang, C2=Tonghui, C3=Bafang, C4=Yuanyi, C5=Hongqiao, C6=Minzhu



Importance of the problem areas Air Quality, Water Quality, Waste Disposal

RESULTS

STATE OF IMPLEMENTATION:

- Training and preparation of employees from the Xinjiang Academy for Environmental Protection Sciences (XJAEPS) for the face-to-face interviews
- Four teams of two carried out the survey
- Around 230 households took part in the 45 minute long interviews, which provided a total of 211 completed questionnaires from the six districts (Dipang=36, Tonghui=42, Bafang=26, Yuanyi=37, Hongqiao=33, Minzhu=37)
- LOCAL USERS / TARGET GROUPS:
- Xinjiang Academy for Environmental Protection Sciences (XJAEPS), Municipality of Midong, Private Households

IMPACTS:

- The survey provided new knowledge on the behaviour of households in using energy and water, in generating and separating waste and in their general environmental behaviour and awareness
- The areas which were rated by participants as particularly problematic are air quality with 83%, water quality with 66% and waste disposal with 49%
- Of the total number of participants, 55% would separate waste without restriction if they knew how and if it were advantageous to them. This

shows the need for better information on recycling (starting with schools), better infrastructure and the introduction of waste fees on a user-basis (currently calculated together with water usage)

- More information and education is also needed in the area of sustainability – only 6% knew what this term means
- With 48.8m³, water usage per household per annum is very low for Chinese standards. 74% attributed this economic use of water to rising prices
- Rising prices were also the reason for 72% of participants increasing energy-saving measures

MULTIPLICATION:

- The questionnaire can also be used as an investigation tool in other areas (e.g. in Chongqing 2012)
- The knowledge gained forms an important basis for investigations that may be carried out in other regions in the future

LONG-TERM CONSOLIDATION:

- The results of this questionnaire and a second one in 2013 provide evidence of development
- The survey helped to raise awareness of issues such as the environment and sustainability (and also how these will be dealt with in the future)

CONTACT

Project: RECAST Urumqi - Meeting the Resource Efficiency Challenge in a Climate Sensitive Dryland Megacity Environment - Urumqi as a Model City for Central Asia
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