

CAVES Project

Odra River case study

Field research methodology

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Research questions

According to the general scope of the CAVES Project as well as detailed modeling subject established together with the modeling team from the Kassel University the following research questions were formulated:

1. What are the rules, that govern the decision making processes of landowners with respect to land use and land reclamation maintenance in the CAVES study area?
2. What is the nature of social networks in the study area?
3. What are the stakeholders' perceptions of both land use and social changes in the past?
4. What are the stakeholders' visions of future scenarios regarding rural areas in our study area?

Research method

The semi structured qualitative interview (Babbie, 2001; Frankfort-Nachmias, Nachmias, 1996) was chosen as a research technique. Interview guidelines and later, more formalized questionnaires, were constructed to find answers for research questions and meet the needs of the modeling team. Two versions of the questionnaire were developed, one for land owners and the other for experts. The scope and form of questions (open-ended questions) are determined by requirements of a fine-grained agent-based model.

Included questions concern following issues: land use changes in the past, decision rules regarding land use, land reclamation system maintenance and collective action, social networks, future scenarios. The questionnaire was tested and discussed with key domain experts.

The interview structure:

I Land use and social changes in the **past**

II A **Presence** - decision rules regarding land use

II B **Presence** - decision rules regarding land reclamation system and collective action

II C **Presence** - social networks

III **Future** scenarios

We did not make any sampling at the present state of the project, since the study area covers only one village. Thus we decided to make interviews with the whole study population of relevant households¹. The interview is conducted with the legal landowner, and in case of his/her absence, with his/her spouse, who is usually a co-owner or with his/her parents.

¹The households with at least one landowner.

Organization of the research process

Interviewees (landowners) in Rogow Legnicki village were identified (names and addresses, phone numbers) according to landownership maps, data from local authorities and other sources of information. The covering letter was prepared and personally distributed among interviewees in order to get permission for interviews. All answers were noted in the questionnaires. Moreover some interviews were recorded if the permission from a respondent was obtained.

The first wave of field research was carried out in February 2006, the next one has to be performed in summer 2006. One interview usually takes about 1.5 hour with a landowner and 2-4 hours with an expert.

Results analysis

In order to analyze interviews' transcript the open coding method (Babbie, 2001) will be applied. The main purpose of this analysis is to elicit decision rules of potential agents (Tab.1). Additionally detailed information about land use types, crop types, the perceptions of land use change in the past and future scenarios as well as the nature of social networks will be obtained. This information (coded and attributed to every landowner) will be inserted into the Agents Data Base.

Tab.1 From interviews to decision rules – examples.

	EXEMPLARY QUESTIONS			
	Afforestation: yes/no – why?	Ploughing meadows: yes/no – why?	Selling land: yes/no – why?	Participation in a Water Partnership (WP): yes/no – why?
Interview transcript	„I do afforest 5th class lands to get subsidies”	„I don't plough meadows cause I mow them and sell hay. Once I had meadows for cows.”	„I want to sell the whole farm soon, cause there are no successors”	„They do nothing, so why should I pay? If they did it right I would pay.”
Detailed rule	IF soil class 5 or 4 THEN afforest	IF milk production OR selling hay THEN do not plough meadows	IF successors do not exist THEN sell land	IF local authorities take proper care of land reclamation system THEN participate in a WP
General rule category	Soil class	Production type	Presence of successors	Activity of local authorities

INTERVIEW GUIDELINES

I Land use and social changes in the past

(land use)

How long have you been living and farming here? What kind of changes in land use occurred in the nearest area within this time?

(landscape)

What kind of changes in landscape occurred in the surrounding area within this time?

(life style)

What kind of changes in people's life style occurred in the surrounding area within this time, regarding neighborhood relations, decision making, and farming?

II A Presence - decision rules regarding land use

(land use)

In what way do you use your lands? What kind of crops do you cultivate and why?

(land use change)

Do you intend to buy or sell land? Why yes? Why not?

Do you intend to plough meadows? Why yes? Why not?

Do you intend to afforest land? Why yes? Why not?

Do you intend to participate in agri-environmental program? Why yes? Why not?

(decision rules in the village)

What is the way people in your village make decisions about farming?

(COMMENT: Interviewed persons may not tell the truth about themselves, probably they will tell more about neighbors or people in the village generally)

- They personally calculate costs and benefits.
- They read magazines about farming or watch TV programs on this issue.
- They ask someone for advice (whom?: experts, neighbors, family, friends, whom else?).
- They imitate neighbors. (Which ones?)
- They do, what they always did. *(check if: They always did, what they were told to do. OR They always did everything according to the tradition they were brought up in. OR Something else?)*
- Other ways?

(attitude to innovation) How would people in the village react if someone changed the way of farming in considerable way e.g. towards agrotourism, local product like green-legged hens, ecological farming? (acceptance, jealousy, irony, admiration?)

II B Presence - decision rules regarding land reclamation system and collective action

(general opinion about land reclamation system)

What do you think about land reclamation system in the surrounding area? Does it work efficiently? According to your knowledge, who is responsible for its maintenance? And according to your opinion, who should be responsible for that?

(personal problems with drainage/irrigation)

Do you personally suffer from flooding and/or droughts? How does it depend on the crop type? How does it influence yields and income? How do you deal with these problems?

(personal maintenance of land reclamation system)

Do you have any detailed land reclamation (DLR) facilities on your lands? What kinds?

What does it mean “to maintain DLR”? What do you need to fulfill this task:

- Skills (which ones?)
- Tools (which ones?)
- Time (how much?)
- Health, strength
- Money (how much?)
- Help (what kind?)
- Knowledge (on what?)

Do you personally take care of DLR? Why yes? Why not?

(collective action)

Do you think Water Partnerships work as they should? Why yes? Why not?

Are you personally engaged in Water Companies’ activity? Why yes? Why not?

(collective action)

How would you try to convince neighbors to cooperate in Water Company, if it was your task? What would make **you** convinced?

II C Presence - social networks

(information/advise)

How many people can you ask for advice or information regarding farming issues? Who are these people (family, friends, neighbors, others)?

(help)

How many people can you ask for help on the farm if necessary? Who are these people (family, friends, neighbors, others)?

(trade)

With how many people can you exchange the farm products like milk, eggs?

(cooperation and social activity generally)

Do people in the village help each other, convey useful information, organize themselves to achieve a common good? How would you assess their activity? Do you personally participate in community meetings, local organizations, fetes etc.?

(sources of information)

What are the main sources of information about agricultural issues in your village?

- Press
- TV
- Neighbors
- Internet

- Professional advisors
- Local authorities
- Books
- Village chairman
- Community meetings
- NGOs
- Workshops, trainings

III Future scenarios

(resistance to external shocks)

What would happen with your crops in case of flood or drought?

(land reclamation)

What will happen with the quality of land reclamation system?

(land use change)

What kind of changes in local agriculture do you expect in the nearest future?

References

1. Babbie E., 2001, *The Practice of Social Research*, Wadsworth/Thompson Learning, pp. 659.
2. Frankfort-Nachmias Ch., Nachmias D., 1996, *Research Methods in the Social Sciences*, Scientific American/ St. Martins's College Publishing Group, Inc., pp. 616.