

Decision-making and Spatial Data Infrastructures in the Public Sector in India

Prasanna Kolte, PhD 3 of the NWO-WOTRO project on SII in Indian Cities

Supervisor: Dr. Luc Boerboom

Promotor: Prof. Yola Georgiadou

Working Title:

Abstract:

The topic of my research is decision-making, spatial data infrastructures and public administration. This research focuses on public decision-making in a selected Indian city using the case of spatial data infrastructure in (participatory) budgeting. I am particularly interested in the ways in which spatial information is used in public decision-making and the contributions of local spatial data infrastructures in participatory decision-making in Indian cities.

Spatial information collection, storage and retrieval are the base of an SDI. The Indian-NSDI (website, 2003) claims that spatial information is good for decision-making and government decision-makers are using spatial information for decision-making as more and more spatial data sets on a variety of themes are available to them. But one of the challenges faced by governments and developers and promoters of SDIs in India is to increase the use of spatial information in government decision-making (Sivakumar *et al*, 2004).

In the light of above claims it is important to understand how local government decision-makers in Indian cities make decisions, what spatial information they consider useful for decision-making, how does use of spatial information influence decision-making and whether they are benefitting from it. Keeping this as the main focus, this research studies how individual decision-makers and (individuals in) collectives use spatial information to make decisions.

For this purpose I will make use of the concepts of 'frames' and 'framing' to understand the cognitive and behavioural aspects involving the use of spatial information in decision-making. Following Goffman (1975) and Tversky and Kahneman (1981), frames are images of a social reality that generate perceptions of the 'real world' that drives their decision-making.

The concept of frames would be used as a proxy to study cognition. If we understand how frames are generated and how they affect decision-making (cognitive frames) and in turn how frames influence the selection of spatial information in different decision situations, we can draw important conclusions for upscaling and institutionalisation of spatial data infrastructures in the India context.

Frames can be observed and retrieved from behavior – spoken language, body language. I 'bring' out these frames situated in an individual's mind by understanding his/her behaviour and by observations of their decision and physical environments.

Since this study focuses on the public sector, the decision environment which I propose to study is a committee environment which makes decisions on public budgets, such as the budget Standing Committee at the municipal corporation, or the Citizens Committees for participatory budgeting at local level that decides resource allocation.

Therefore I start with asking the main research question, *how does spatial information influence (participatory) resource allocation decision-making in Indian cities?*

Theoretically, the research is grounded across decision science, public policy (public administration), information science. I will use ethnographic methods such as participant observation, artifact shadowing and in-depth interviews. Initial efforts would be spent on identifying decision environments to study and in understanding networks of practices (linkages and relationships between organizations, groups and individuals) in the city. Hence the first round would be interviews of various decision-makers – groups and individuals. This would help decide an appropriate entry point/s for participant observation and shadowing. Data would be recorded as interviews in field notebooks and audio recordings.

Studies of decision-making in developing countries are scarce and through this research we attempt to fill this gap to extend the understanding of cognitive and behavioural aspects on decision-making in non-western environments. At the same time it is our effort to fill the gap of 'real world' empirical case studies focusing on cognitive aspects of decision-making by individuals and in collectives.

Literature Cited:

India-NSDI Portal. (2003). <http://gisserver.nic.in/nsdiportal/gos> (Last accessed: 2 October 2008).

Goffman, E. (1975). *Frame analysis: An Essay on the Organisation of Experience*. Penguin Books, Harmondsworth.

Sivakumar, R., M. Rao and A.R. Dasgupta. (2004). *National Spatial Data Infrastructure (NSDI) –The Vision Ahead*. GSDI-7, Bangalore, India, January 30- February 6, [online] URL: gsdidocs.org/gsdiconf/GSDI-7/papers/Nlskk.pdf (accessed - 21 august 2008).

Tversky, A. and D. Kahneman. (1981). The Framing of Decisions and the Psychology of Choice Author(s): *Science*, New Series, 211(4481), pp. 453-458.

20 April 2009