

Participatory Mapping in Informal Settlements: An Instrument for Empowerment, or Exclusion? Reflections from Three Cities in South Africa and India

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The extensive literature on community based mapping argues that both the processes and products of co-produced spatial knowledge are supportive of more inclusive development (Hordijk, 1999; Chambers, 2006; Elwood, 2006; Rambaldi et al, 2006). Participatory mapping changes access to and ownership of information (Elwood, 2006), it fosters learning and engagement between ‘experts’ and communities, it can build community cohesion (Hordijk, 1999) but it can also lead to conflict and exclusion (Chambers, 2006; Elwood, 2006). The power of community based maps in changing development outcomes, and the conditions under which these maps are empowering or exclusionary requires further research. This paper reflects on participatory mapping processes in three cities namely Durban, Cape Town and Delhi where community ‘mapping’ has achieved different outcomes.

Ocean Drive-In is an informal settlement in the north of **Durban**. When the Chance2Sustain research team from the University of KwaZulu-Natal first began to engage with Ocean Drive-In residents¹ it was clear that they were a community ‘in-waiting’. They had been informed that they would be relocated to a formal housing project, Hammonds Farm, as a result of their settlement being located on private land, but they did not know *when* this would happen.

In exploring issues around housing, water and sanitation and the ‘right to the city’ with the community, community members told the research team that when they raised their concerns with the councillor or they protested about the insecurity of the move, they were reminded that they were ‘not on the map’ of the city. This was a powerful statement as it positioned the informal settlers as ‘illegal’

residents of Durban, whose informality meant that they were invisible on the abstract, codified maps of the city. Officials indicated that Ocean Drive-In was included on municipal maps, however it was represented at the settlement level only.

The research team was interested in the role that community based spatial knowledge could play in empowering the residents of Ocean Drive-In and through discussions with the community it was decided that a digitised community based map and a GIS map would be produced. Every shack in the settlement was geo-referenced using a GPS. The house number was used as the reference number and details of the members of the household were collected. The process revealed the highly political nature of mapping, as initially community members hid the numbers of their doors with blankets and would not participate in the mapping process as they feared that the researchers were acting on behalf of someone else or the Municipality, ‘stealing their housing numbers’ to allocate them to someone else. This issue was resolved by the researchers presenting the purpose of their research at a community meeting held by the councillor to address the recent protests in the settlement over the delay in the move. Residents asked questions about the process, including the important question of ‘how will this map help us?’ The possible benefits of mapping the settlement were outlined. The research team also indicated that this would be a learning process where the community and the researchers could jointly determine the value of the map.

The GIS map, which contained the exact location of each shack with the details of the head of household and number of household members, was presented to the community for ground truthing two weeks before the Municipality announced that the relocation of residents to Hammonds

1 The Chance2Sustain team began engaging with the community in April 2011.

Farm would take place². Residents of Ocean Drive-In responded positively to the maps and were excited and proud to see their names and households on the formal GIS map, because it both 'put them on the map' in their city and it had been developed through their participation. At that point it seemed that the purpose of the map had been to build capacity in the community and to be a historical reminder that people had lived at Ocean Drive-In, given the impending move. However, the process of moving the community to Hammonds Farm has been extremely slow and by May 2014 almost half of the original residents remain in the informal settlement, living in insecure and difficult conditions, as the settlement is dismantled around them. Given this high level of insecurity the map has now become a valuable asset to the community as it provides proof of who lived in the settlement prior to the start of the move on 7 November 2012. The community members own the map and what has been striking about the process is that even though Ocean Drive-In is divided along political lines, the mapping process has not been contested or has not, as yet, resulted in conflict. The right for housing officials or politicians to use the map remains in the hands of the Ocean Drive-In community, however, the housing department is aware that the map has been produced.

Europe informal settlement in Cape Town is located on the south side of the N2 highway between the city centre and the airport. The ground on which people have lived in shacks for more than 20 years is located on top of a former landfill site, and so it is unstable and emits methane gases. The landfill site creates a ridge covered by an uncoordinated and increasingly dense cluster of shacks without proper drainage systems. Residents therefore experience regular floods in addition to the poor service delivery and poverty that characterise urban informality. While plans to upgrade the settlement have circulated regularly, Europe has neither benefited from the city's own upgrading programme nor by the large-scale housing project N2 Gateway, targeting informal settlements along the highway.

Europe residents have participated in various initiatives by NGOs and other external actors who have attempted to construct community-based spatial knowledge. Assisted by the Community Organization Resource Centre (CORC)³ community representatives in Europe conducted a community-based household survey ('enumeration') in 2009. Moreover, in the early part of 2011, Europe and adjacent Barcelona settlement, together with CORC and a group of planning students from the University of Cape Town, embarked on a community-based spatial development framework. Whereas both these initiatives generated in-depth spatial knowledge about the socio-environmental

condition of the settlement, the residents' experience with these 'mapping exercises' stand in contrast to the story of Ocean Drive-In in Durban. Two factors stand out. Firstly, due to the authorities' assessment of the unsuitability of the land, the residents' participation did not lead to an experienced change in their living situation, hence any expectations stemming from these initiatives were eventually unfulfilled. Secondly, rivalry between local leaders politicised the role of the enumeration and the community plans, circumscribing their influence. In fact, to certain representatives in Europe, sharing community-based knowledge with authorities with whom they lacked trust, was seen as carrying more risk than opportunity.

The case of Kathputli Colony in Delhi⁴, a forty-year old squatter settlement housing approximately 15,000 people, provides a contrasting experience of missed opportunities for residents' participation. In 2008 the Delhi Development Authority (DDA) selected this settlement to implement its first in-situ slum re-development project in partnership with the private sector. The developer who was awarded the contract will use only part of the land occupied by the slum (60%) to construct multi-storey blocks of flats to rehouse its residents, while the rest of the plot (40%) will be cleared for residential and commercial developments to be sold on the open market.

Identification surveys are central to the DDA approach to slum rehabilitation, and their results decide the fate of slum dwellers, as they are used to establish the list of households who will be eligible for flats in the new housing complex. Several surveys were conducted in Kathputli Colony between mid-2008 and January 2012 in relation to the project, the first one by a private consultant with the support of an NGO working in the settlement, and the others by public agencies (or agencies under their control). However these surveys did not involve the community's participation, barring the assistance of some local leaders and residents to guide the surveyors in the web of the settlement's narrow lanes. The first reason may be that there is a multiplicity of communities living in distinct sections of the settlement, with their own leaders, and no unifying strong leadership at the entire settlement level. In addition, there is no consensual community-based organization. On the other hand, competition and rivalries between two NGOs working in the settlement have created a new line of fragmentation. The conclusions drawn from a participatory experience for a water supply and drainage project implemented in Kathputli Colony in the mid-1990s appear relevant even today: "The conflicts between the two NGOs (...) have indirectly motivated the divisions within the community and disturbed participation in various stages of the process of settlement improvement" (Marulanda, 1996: 10). In the context of the

2 The move of residents to Hammonds Farm began on 7 November, 2012.

3 CORC is an organisation affiliated to the Slum Dwellers' International (SDI) Alliance.

4 The section on Kathputli Colony draws on Dupont et al. (2014).

DDA rehabilitation project, some degree of mutual mistrust between these two NGOs has intensified. Thus, the results of the first survey (conducted with the support of one NGO) were contested by the followers of the other NGO, who requested the DDA to conduct a fresh door-to-door survey.

Eventually, the residents had little control on the way these surveys were conducted, the list of the surveyed households was not publicized by the DDA, and the local leaders could access it only in January 2013, after repeated requests, including formal “Right to Information” applications. The scrutiny of this list enabled the residents to point out many omissions during the DDA survey. To avoid the exclusion of some families from the rehabilitation project, the local leaders realized, although tardily, the importance of establishing their own list and collecting proof of residence for the families in their respective communities. In other words, they understood the potential power of community-generated knowledge for challenging the government’s expert knowledge.

Yet, as far as detailed settlement mapping is concerned, there was no attempt, be it by the government agencies, the residents, or the NGOs working in the settlement, to draw such a map. What appeared to be lacking from the outset was a clear vision of the benefit, for the residents as well as other stakeholders, of producing spatial knowledge of that kind. In addition, participatory mapping would require a degree of cooperation and trust among all the sections of the settlement

and the acceptance by all of them of the “organizers” coordinating the entire process, which seems difficult to achieve in a fragmented (non)community.

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Chance2Sustain examines how governments and citizens in cities with differing patterns of economic growth and socio-spatial inequality make use of participatory (or integrated) spatial knowledge management to direct urban governance towards more sustainable development.

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