Spatial Knowledge Construction through Community Engagement

Indo-British perspectives on planning and architecture education
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SPATIAL KNOWLEDGE & GOVERNANCE

EXISTING SPATIAL KNOWLEDGE (Explicit Knowledge)

COMMUNITY BASED SPATIAL KNOWLEDGE (Tacit Knowledge)

Weak KTT & Operates thru KCs

LOCAL PLANNING & GOVERNANCE

Beauracratic/Technocratic

Deliberative Democracy/KTT
Spatial Knowledge & Local Governance

- Spatial knowledge could be used for strategic governance (spatial targeting and more effective use of resources).
- Deliberative Governance requires spatial knowledge from various sources.
- Codified expert knowledge Vs. Community based knowledge.
Types of Spatial Knowledge

• Geo referenced maps – not available for local governance.
• Sectoral Knowledge anchored to nodal positions in government organisations is recognised and utilised partially (Explicit Knowledge).
• Community based knowledge is heterogeneous linked to divisions within local communities (Tacit Knowledge).
• Community based knowledge (which is spatially and socially constructed) is not officially recognised or utilised by government (May be because KTT or mechanisms do not exist) – (Knowledge Mismatch).
What are we looking for?

- Where and why the hotspots of marginalisation/inequality occurs in a city?
- What kind of hotspots emerge?
- How Knowledge is Constructed in the democratic process through Citizen Participation?
- How it gets transmitted through Knowledge Transfer Tools (Persons/Mechanism)?
- How it gets incorporated and excluded in the decision-making process?
- Does the Tacit/Explicit knowledge recognises the hotspots of the city and address those in decision making process?
CASE STUDIES
-
HUBLI-DHARWAD CITY & NIMRANA (BLOCK AND VILLAGE STUDY)
METHODOLOGY

• HOW WE WENT ABOUT?
• EXCLUSIONS & INEQUALITIES: MAPPING
• GOVERNANCE: MATCHING KNOWLEDGE & RESOURCE ALLOCATION
• HOW THE SPATIAL KNOWLEDGE GETS TRANSMITTED INTO IMPLEMENTABLE ACTIONS THROUGH PARTICIPATION
HUBLI-DHARWAD CITY - KARNATAKA
Methodology

• Identifying hotspots based on Census data secondary data from HDMC. – Use of GIS & Mapping Techniques.

• Primary (Structured) Survey of:
  – Meeting with Stakeholders (Three Rounds)
  – All the elected representatives (67)
  – Selected Zonal Committee Members from all the 12 zones
  – Selected Ward Committee Members from all the Ward Committees (67)
  – 150 stratified Households spread over all wards.
  – Location of Overhead tanks and their capacity through GPS survey

• Secondary Data On:
  – Spatial Data from Google, HDDA, HDMC
  – Water Supply Data through KSWSSB & Veolia Pvt. Ltd.
  – Public Grievances, Budget and Committee Meetings
WARD NO. 18 HAS EMERGED AS A COMMON HOTSPOT FOR ALL THE ASPECTS i.e. SPATIAL INCLUSION, WATER SUPPLY AND GOVERNANCE.

CONCLUSION FROM THE OVERALL ANALYSIS

<table>
<thead>
<tr>
<th>HOTSPOT</th>
<th>SPATIAL INCLUSION</th>
<th>WATER SUPPLY</th>
<th>GOVERNANCE</th>
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1. The two cities are spatially disintegrated.
2. Exclusion in terms of 
   - Unauthorized construction
   - Slum areas
   - BPL population
   - Land values
IDENTIFICATION OF HOTSPOTS

ISSUES

- Exclusion in terms of access to tap water connection.
- Exclusion in terms of per capita availability.
- Exclusion in terms of budget allocation.
- Maximum grievances are related to pipeline leakages.

INFRASTRUCTURE HOTSPOTS

<table>
<thead>
<tr>
<th>WARD NO.</th>
<th>ACCESS TO WATER</th>
<th>PER CAPITA AVAILABILITY</th>
<th>GRIEVANCES</th>
<th>BUDGETARY EXCLUSION</th>
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IDENTIFICATION OF HOTSPOTS

HOTSPOTS:
- There are 4 wards emerging as hotspots after the overall analysis:
  1) For exclusion - Ward No. 18
  2) For participation & accountability - Ward No. 48
  3) For efficiency - Ward No. 34
  4) For equity - Ward No. 27

- Out of these four hotspots, Ward No. 18 lies in Dharwad and Ward No. 34, 48, and 27 lie in Hubli.

- Hence, Dharwad consists 1.49% and Hubli consists 4.47% of the hotspots.

ISSUES:
- Exclusion is witnessed in the decision making process.
- The conduction of C.C. meeting has been irregular in many of the wards.
- The allocation of the budget is inadequate as per the need of the priority areas.
Citizens’ Perception: Community Characteristics

- Primary survey was carried out in 2 localities each in two cities:
  - No of H.H - 110
  - Avg family size 5.7
  - Sex ratio - 994

Religion Breakup:
- Hindu 78%
- Muslim 19%
- Christian 1%
- Others

Income Breakup:
- 20000< 10%
- <25000 18%
- 25000-50000 27%
- 50000-100000 22%

Awareness about organizations & leaders:
- 61% are aware about civil society organizations
- Only 30% know about all activities of them

Awareness about planning activities:
- 41% are aware about planning activities
- 78% has newspaper as source of information
- None of respondents were actually aware of the contents of above stated plans

Participation in community based activities:
- Only 12% are present participating for monitoring and maintenance
- 88% are willing to participate in resource mobilization
- Experience in resource mobilization
- Only 24% prepared for plan
- 16% for preparation
- 9% for implementation
- 7% monitoring
- 22% in maintenance
- 17% in C.D.P

Trust:
- Only 54% are formal leaders
- 25% informal leaders
- 67% C.S.O

Satisfied with services:
- Health 75%
- Sewerage 78%
- Water 90%
- Drainage 78%

Preference for public facilities:
- Water 95%
- Sewerage 85%
- Health 58%
- Drainage 86%

- Since HDMC has improved itself a lot in last few years people have high satisfaction levels and preference for it
- No such variation can be seen locality wise also
Conclusions

1) As the Group ‘spatial knowledge transmitters’ are weak ‘individual knowledge generators & transmitters’ get over riding access in the decision making process. Need to build strong knowledge networks at spatial level for efficient decision making process.

2) Tacit spatial knowledge especially related to micro-governance gets sidelined in becoming an ‘explicit knowledge’ because of the existence of ‘gate keepers’ as transmitters. This results in exclusion of marginalized groups due to uneven political claims.

3) Path dependency in knowledge construction and heavy reliance on new found and funded technology (e-governance system) which is standardized and centralized have led to explicit ‘process centered governance process’ than ‘product centered governance’ (output oriented) which is required to achieve equity and efficiency.
4) Similarly ‘exclusion by design’ is explicit in infrastructure provision. There is a complete mismatch between spatial knowledge in terms of marginalized areas (hotspots) and explicit knowledge which is used in budgetary allocation.

5) Accepting and building on the local tacit knowledge by formal institutional structure and incorporating in ‘product oriented micro governance process’ will improve the inclusionary process in planning and decision making. This is possible through:
   - Formal institutional acceptance of Tacit Knowledge
   - Outcome oriented process emphasis
   - Micro Governance/Ward level governance

END RESULTS:

- TRANSPERANCY IN GOVERNANCE – COMMUNITY AUDIT OF TENDERS
- TRANSPERANCY IN FUND ALLOCATION – WARD BUDGET ALLOCATION ON WEB PAGE
- COUNCILLORS ARE AWARE OF HOTSPOTS AND STARTED DEMANDING FUNDS FOR THEIR CONSTITUENCY
- QUESTIONING THE RESOURCE ALLOCATION PROCESS (BUDGET MAKING AND DISTRIBUTION)
NIMRANA BLOCK
(GROUP OF VILLAGES)
- RAJASTHAN
FORMULATION OF STRATEGY FOR VILLAGE DEVELOPMENT THROUGH COMMUNITY PARTICIPATION

- AIM:
  - VILLAGE DEVELOPMENT THROUGH COMMUNITY PARTICIPATION.

- OBJECTIVES:
  - TO STUDY THE SOCIAL, ECONOMIC AND PHYSICAL CHARACTERISTICS OF JAITPUR, MEHTAWAS, GIGLANA & BIJAYSINGHPURA VILLAGES & ANALYSE ITS PRESENT STATUS.
  - TO ASSESS THE FELT NEEDS OF VILLAGE COMMUNITY AND THEIR PARTICIPATION IN THE PLANNING PROCESS.
  - TO FORMULATE STRATEGIES FOR DEVELOPMENT OF VILLAGES THROUGH COMMUNITY PARTICIPATION.

SEQUENCE OF PRESENTATION:
1. REGIONAL SETTING AT NCR, DISTRICT, TEHSIL, BLOCK & VILLAGE LEVEL.
2. HUMAN RESOURCE - DEMOGRAPHY AND WORK FORCE PARTICIPATION AT TEHSIL, BLOCK AND VILLAGE LEVEL.
3. SETTLEMENT CHARACTERISTICS OF VILLAGES.
4. LAND UTILIZATION, CROPPING PATTERN AND LAND HOLDINGS AT TEHSIL AND VILLAGE LEVEL.
5. INFRASTRUCTURE - PHYSICAL, SOCIAL AND ECONOMIC.
6. EXISTING PROGRAMMES AND SCHEMES, PEOPLES AWARENESS AND EXISTING COMMUNITY PARTICIPATION IN VILLAGE DEVELOPMENT.

- NEED FOR THE STUDY

- FORMULATION OF OBJECTIVES

- IDENTIFICATION OF VILLAGES

- DATA BASE

- PRIMARY
  - METHOD ADOPTED (PRA)
    - PROBLEMS OF VILLAGE
    - POTENTIAL OF VILLAGE
    - AWARENESS ABOUT GOVERNMENT SCHEMES & PROGRAMMES
    - PEOPLE'S PARTICIPATION IN PLANNING & DECISION MAKING
    - VISION FOR VILLAGE DEVELOPMENT

- DATA ANALYSIS

- IDENTIFICATION OF ISSUES AND POTENTIALS

- FORMULATION OF STRATEGY FOR VILLAGE DEVELOPMENT THROUGH COMMUNITY PARTICIPATION

- SECONDARY

  - REGIONAL SETTING
  - HUMAN RESOURCE AND SETTLEMENT
  - LAND UTILIZATION INFRASTRUCTURE
  - GOVERNMENTS PROGRAMMES & SCHEMES

- SWOT ANALYSIS
  - VILLAGE DEVELOPMENT POTENTIAL
  - PROBLEM IDENTIFICATION
  - PRIORITIZATION WITH EMPHASIS ON LOCATION OF INFRASTRUCTURE BASED ON COMMUNITY ACCEPTANCE
JAITPUR VILLAGE

PROFILE
• TOTAL POPULATION - 1327 (2001).
• DECADAL GROWTH - 4.7%
• GENERAL - 5%, SC - 25% AND OBC - 70%.
• TOTAL AREA - 281.27 Ha.
• HABITABLE AREA - 2%.

INFERENCES
• VILLAGE HAS HAPHAZARD GROWTH PATTERN.
• DOMINANTED BY OBC (YADAVA).
• AFTER 1991 EASY ACCESS TO WATER OR ROAD HAS INFLUENCED THE GROWTH DIRECTION.
• MAJOR PROBLEM IS OF WATER, STREET LIGHTS AND UNEMPLOYMENT.
MEHTAWAS VILLAGE

PROFILE

- DECADAL GROWTH - 4.3%
- GENERAL - 15%, SC - 25% AND OBC - 60%.
- TOTAL AREA – 550.04 Ha.
- HABITABLE AREA - 2.5%.

INFERENCES

- COMPACT SETTLEMENT AND HAPHAZARD GROWTH.
- SC COMMUNITY IS MAINLY CONCENTRATED IN GROUPS.
- DISTRIBUTION OF WATER SOURCE ALL AROUND THE VILLAGE.
- OUT GROWTH IS INFLUENCED BY WATER SOURCE AVAILABILITY.
BIJAISINGHPURA

PROFILE

- DECADAL GROWTH RATE - 19.6%
- SC - 35% AND OBC - 65%.
- TOTAL AREA - 241.74 Ha.
- HABITABLE AREA - 2.5%.

INFERENCES

- VILLAGE IS SPARSELY POPULATED AND LINEAR IN SHAPE.
- DOMINANTED BY OBC (YADAVA) AND NO GENERAL CASTE POPULATION.
- WATER HAS INFLUENCED THE GROWTH DIRECTION.
- MAJOR PROBLEM IS OF WATER CONTAMINATION BY FLORIDE..
GIGLANA VILLAGE

PROFILE
• TOTAL POPULATION - 4176 (2001).
• DECADAL GROWTH - 12%
• GENERAL - 63%, SC - 13% AND OBC - 24%.
• TOTAL AREA - 991 Ha.
• HABITABLE AREA - 2.7%.

INFERENCES
• VILLAGE IS COMPACT AND NUCLEATED.
• SERVICES ARE SPREAD TO EVERY CORNER OF THE VILLAGE.
• BETTER CONDITION OF ROADS AND PROPER DRAINAGE SYSTEM.
## Issues and Vision in Villages (across all Age Groups)

**Source:** Primary Survey (April, 2007)

### Group/Village

<table>
<thead>
<tr>
<th>Group/Village</th>
<th>Jaitpur</th>
<th>Bijaisinghpura</th>
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<tr>
<td>Elderly</td>
<td>WATER HARVESTING</td>
<td>CLEAN WATER SUPPLY</td>
<td>TOILET FACILITY</td>
<td>DISTRIBUTION OF WATER SUPPLY NETWORKS</td>
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<td>MANDI/MARKET CENTRE LIBRARY</td>
<td>WATER TAPS IN EACH HOUSEHOLD 24 HOUR ELECTRICITY FREQUENT PUBLIC TRANSPORT</td>
<td>MANDI/MARKET CENTRE USE OF HYV SEEDS</td>
<td>IMPROVED TOILET FACILITY</td>
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<td>TECHNICAL EDUCATION FOR GIRLS HEALTH FACILITIES</td>
<td>FREQUENT PUBLIC TRANSPORT</td>
<td>MANDI/MARKET CENTRE</td>
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<tr>
<td>Children</td>
<td>PLAYGROUNDS</td>
<td>GREEN SPACE PLAYGROUNDS</td>
<td>BUS SERVICES PLAYGROUND</td>
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<td>8th to 12th</td>
<td>QUALITY EDUCATION CLEANLINESS</td>
<td>ELECTRICITY ROAD CONNECTIVITY</td>
<td>ELECTRICITY CINEMA HALL</td>
<td>REGULAR ELECTRICITY</td>
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<td>&gt;12th</td>
<td>STD/ISD BOOTHS COMMUNITY CENTRE COMPUTER FACILITY</td>
<td>COMPUTER BASED EMPLOYMENT</td>
<td>H.S.SCHOOLS</td>
<td>CINEMA HALL STREET LIGHTNING</td>
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## Policy

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<td>WOMEN (AND GIRL CHILDREN)</td>
<td>CONNECTIVITY</td>
<td>NURSING HOME</td>
<td>COMPUTER EDUCATION</td>
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<td>PROFESSIONAL COMPUTER COURSE</td>
<td>SMALL HOSPITAL</td>
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<td>INFORMATION TECH.</td>
<td>FOR GIRLS</td>
<td>WATER TAPS</td>
<td>IN SMALL SCALE INDUSTRIES</td>
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<td>SANITATION</td>
<td>AMBULANCE SERVICES</td>
<td>SMALL SCALE</td>
<td>MAHILA MANDAL</td>
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<td>SSI-DAIRY ETC.</td>
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<td>AMBULANCE</td>
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<td>H.S.SCHOOL FOR GIRLS</td>
<td>LOCAL SHOPPING CENTRE</td>
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<td>HOSPITALS WITH FEMALE DOCTOR</td>
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<td>ADULT EDUCATION</td>
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### Inferences

1. Almost all villages have the same issues and vision for development.
2. Computer facility is the most aspired for.
3. Children and women are getting aware of their village development.
VILLAGE PROPOSAL

BIJAISINGHPURA VILLAGE
JAITPUR VILLAGE

VILLAGE BOUNDRY
VILLAGE ROAD
AGRICULTURAL LAND
SETTLEMENT IN 1991
SETTLEMENT IN 2001
PUBLIC PLACES
GENERAL CASTE
OBC
SC
LEGEND
PROPOSED WELL
NOT TO SCALE

VILLAGE PROPOSAL

LEGEND
- VILLAGE BOUNDARY
- VILLAGE ROAD
- AGRICULTURAL LAND
- SETTLEMENT IN 1991
- SETTLEMENT IN 2001
- PROPOSED WELL
- PUBLIC PLACES
- GENERAL CASTE
- OBC
- SC

NOT TO SCALE
TACIT KNOWLEDGE 2 EXPLICIT KNOWLEDGE

• CONTINUOUS ENGAGEMENT WITH THE VILLAGERS, ELECTED REPRESENTATIVES, EMPOWERMENT.

• ISSUE OF RIGHTS TO BASIC NEEDS + HIGHER NEEDS.

• ENGAGING THE BUREAUCRACY AND POLITICIANS

• NOW THE VILLAGERS DEVELOPED WATER HARVESTING SYSTEM, HAVE ITI, HOSPITAL, AND ROAD CONNECTIVITY.