

# Development Workshop

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## *Survey of beneficiaries for a settlement programme in Surendranagar, Gujarat, India.*

*Notes on survey design.*

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*Prepared for the Aga Khan Housing Board, India.*

## *Introduction.*

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These notes are intended to stimulate ideas for the development of the Surendranagar Settlement Programme Survey, and to assist the preparation of the draft survey document to be prepared in India.

The purpose of the survey is to develop the design brief for the new settlement in Surendranagar and for the houses and facilities that it will contain. To achieve this, and hopefully as a result a 'successful' settlement, means obtaining a good understanding of the way in which the homes of a good cross-section of concerned families are used - in other words to obtain as much as possible a profile of how each space in the home compound - house, buildings, private open space and, equally important, public space close to the home, such as the house frontage - is used, and thus identify what sort of spaces are required.

Before starting one needs to be clear both what the survey aims to do and how it will be done. Each person helping in the survey should have a clear understanding of the objectives, the end product, and the steps that will be taken to reach it. This will help avoid gathering data and detail which is not actually useful.

In this case, the final objective is a housing project with new houses. Families will not be able to work on building their own house, as the house needs to be ready for families to move into when they arrive at the settlement - since the majority of people will be coming from elsewhere. The option of starting with a core house which grows is unlikely to be suitable. But some later growth is probably certain, and should be allowed for.

The direct product of the survey should be a number of different house and space use diagrams, which can then be used to develop several different living unit designs. Combinations of these units - buildings and open space - would make up the overall settlement. By way of example, the different living units may correspond to different typical family sizes, and/or to different types of occupation. It is thus most likely that the number and disposition of rooms, the amount of open space and spaces for animals, and the amount of space for productive activities and storage, etc., will vary. How many variations will be needed should be identified as a result of the survey.

As well as observing how the different spaces which make up the home are used, the survey should deal with the socioeconomic conditions of the different families being studied. There should be a strong focus on how people earn their living, in their present situation, and how they might do so in the future once they are living in the new settlement. The survey should aim to gather information that can give an indication of the effect that a change in economic base and activity may have on how people use and develop their homes and work-places. In addition the survey needs to focus on the way people obtain services at present, and the possible impact on their lives if these services were to be changed, such as bringing a water supply into the compound so that there was no longer any need to go out and fetch it. Because the

people will not be doing their own building, in the survey there would be less focus on the capacity of people to build and on the building materials used.

In undertaking the survey, a major consideration is that for the majority of people their present socioeconomic base and type of activity may change when they relocate: small subsistence farmers might potentially become traders or producers of goods rather than food. The survey should identify whether members of the household have already been involved in seasonal migration to other areas for work, where this had taken place, and what activities were involved. To deal with practical requirements of future activities, the survey needs to focus on identifying what work space, storage and selling space are needed for the sort of activities which will take place, and what animal and gardening needs there are likely to be. To do this, in addition to surveying families directly involved in the programme - people who will be moving to the new settlement - it is suggested that there should be a survey of a sample of households with a similar socioeconomic and activity base to that which is likely to be achieved in the new settlement, and living in similar conditions, from the point of view of market demands, services and environment.

Thus the survey would involve three groups of families: two directly concerned with the programme, the third as a base for socioeconomic information and its lessons on space use. They are:

- a) The families living in small settlements who have expressed their desire to relocate to Surendranagar.
- b) The families who already live in Surendranagar and who will be part of the programme, benefitting from moving and getting better living conditions, sanitation and services;
- c) A sample of families who live in a context similar to the one proposed for Surendranagar, and thus having potentially similar sources and levels of income, and patterns of home and public use of space use.

The number of families to be relocated is quite small (400), and it is reasonable to consider visiting a substantial number of the concerned families, if not all, since this would give the best 'sample'. On the other hand, it is almost certainly unrealistic to consider designing homes for individual families, since this would be a very demanding task with little real added benefit compared to having a small number of different living units. An objective is to arrive at a profile of family types and related space uses so that with reasonable accuracy families can be grouped into different categories, for which different accommodation and facilities are designed.

## *The surveys.*

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The field surveys should involve two types of complementary activity: visual surveys (through observation), and data surveys (through structured questions). The field survey should be preceded by a review of existing information.

### *The review of existing information.*

For the Gujarat survey there is at least (a) considerable demographic data on the target families available through the work of the Gujarat Advancement Programme; and (b) information from the GRUH / Vikas survey on house types and materials, which may be complementary to the information gathered in the new survey, and may be useful in developing designs. There is certainly additional material which would be worth reviewing, and this should be done at the time of designing the field survey, in order to avoid including questions for which there are already answers. Where there is an overlap with information which is needed in the new survey, if the review material is good, then the new survey would not collect the same information again.

### *The field surveys.*

Each survey concerns a single family unit - parents, brothers, sisters, children etc. Lodgers (if any) could be considered as a source of income, and not surveyed; other families using the same compound (if this exists) would be surveyed again, particularly if they are part of the relocation programme.

### *The visual survey.*

The visual survey requires drawing a diagrammatic sketch map for each compound visited. The purpose is to identify what spaces there are, what furniture and other items there are, and how they are used.

The visual survey should start by marking the name of the household, the location of the house, the number of people, and the context of the dwelling unit. A sample sheet is shown here, although in the Gujarat survey the drawing of the building should be much simpler.

The sketch of the compound and buildings in plan, including all out-buildings, can be drawn freehand onto graph-paper, with a rough indication of space dimensions and

# Visual survey form

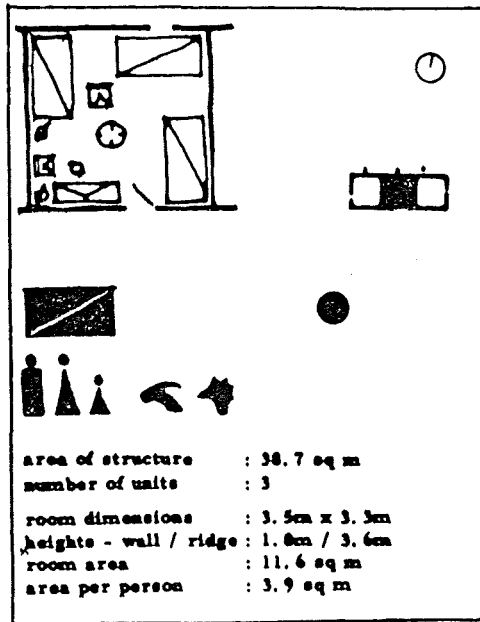
Name of family:

Number of people:

Location:

Situation:

Sketch the house and other buildings in plan, and the open spaces (indicate perimeter); show the use by the family of public space next to the house.



the positions of doors and windows. Some examples are shown here. Wall thicknesses are not necessary (but built in cupboards or alcoves should be shown with a symbol).

On this sketch plan mark furniture, mats, utensils and activities; storage space (indicating what is stored), as well as animals and plants and items such as where a bicycle is stored. The basis for this is a code of symbols, which are used for noting what is in the compound/building. A suggestion of what this list might be like is given below. According to which items are typically found in houses in the region, additional symbols may need to be added or changed, and this should be worked out during the survey design stage. All the symbols must be standardized before survey work starts, otherwise the information is very difficult to collate.

Symbols

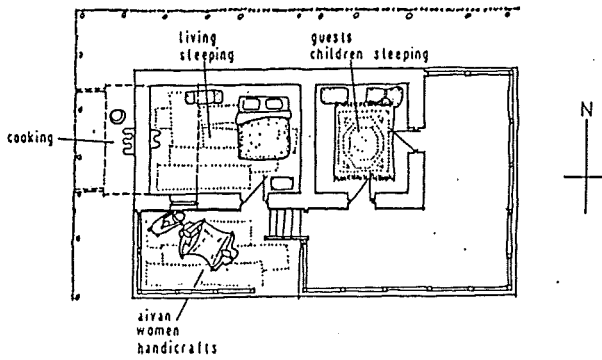
- |  |                   |  |                |
|--|-------------------|--|----------------|
|  | dwelling          |  | chair          |
|  | dwelling/ shop    |  | easy chair     |
|  | shop              |  | stool          |
|  | male/female adult |  | table          |
|  | male/female child |  | round table    |
|  | rabbit            |  | shelf          |
|  | dog               |  | cupboard       |
|  | goat              |  | box            |
|  | sheep             |  | suitcase       |
|  | cat               |  | container      |
|  | chicken           |  | bucket         |
|  | owner             |  | sack           |
|  | tenant            |  | radio          |
|  | sub-tenant        |  | clothesline    |
|  | bed               |  | jiko           |
|  | bunk bed          |  | kerosene stove |
|  | sofa              |  | fire place     |
|  | bench             |  | bicycle        |

It is also quite likely that daytime use and nighttime use of some specific spaces changes, and that there is also some difference at different times of year: as an example the illustrations given here shows seasonal and daily changes in use in a house surveyed in Iran. Where this is the case, information can either be marked directly on the plan (if there are only a few changes in space use) or in more complicated situations, marked on tracing (or semi transparent) paper overlays. Overlays should be stapled to the main plan on the graph paper.

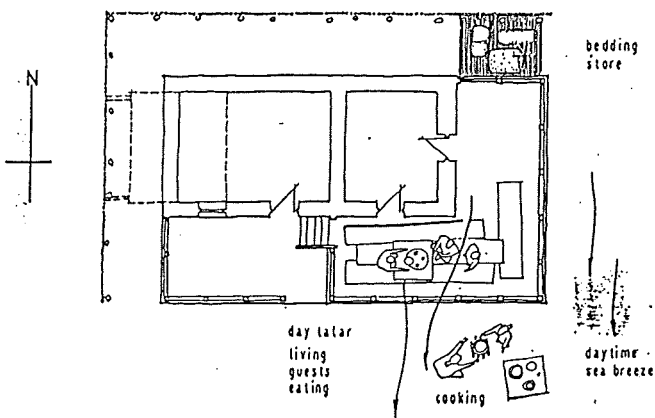
It is assumed that most surveys will take place in the daytime, and all in one season: therefore information about seasonal or daily

Seasonal and daily differences in space uses.

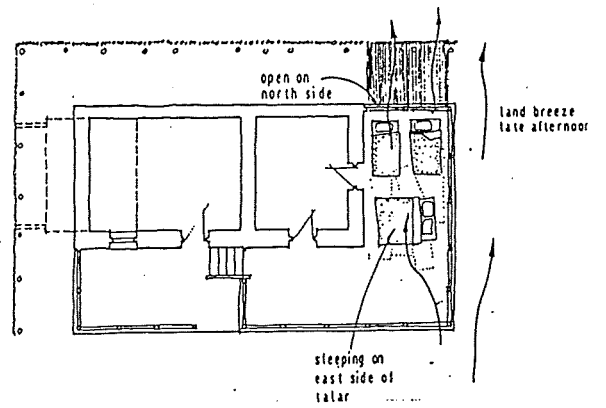
Spring and Fall  
Use of Space



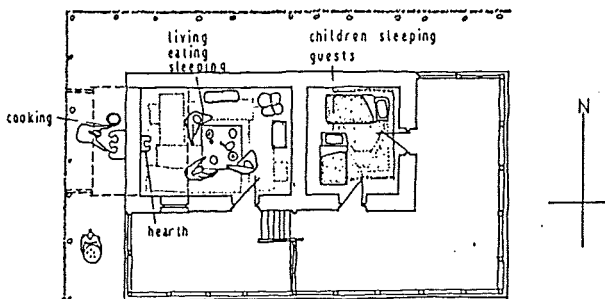
Summer Daytime  
Use of Space



Summer Evening / Night  
Use of Space



Winter - Use of Space



changes in space use will come from asking questions. Complete the visual survey with the help of a responsible member of the household. Ask to be shown sleeping arrangements, and if relevant, where other activities take place (such as eating) if this is not obvious.

Overall, check that you have recorded if and where the following items take place: family meeting; guest meeting; eating; sleeping (different members of household); preparing meals (food washing and cooking); wash dishes & storage; food storage; clothes storage; bedding storage; wash clothes; personal washing; sanitation; food growing; animal living area; children's study area (and play); work space for different people; equipment space or storage area; materials storage; vehicle park (bicycles, etc.). If this would be easier, a check list in the form of a matrix can be used, like the one shown here.

### *Occupant interview*

This is a questionnaire survey with a responsible member of the family (male or female), and for preference with more than one person, since the answers will come more realistically through a discussion than through direct questions (see survey technique below).

This survey divides into five parts:

1. Basic and brief information about the family size and structure, and pattern for growth, children moving out to new homes, etc.

Age, activity and relationship (father, son, etc.,) of each family member.

Information about permanence of residence (i.e. whether someone lives only part of the year with the family, and works elsewhere, etc.);

2. How the home compound / buildings are used (questions for completing the visual survey): questions about sleeping, eating, washing and food production activities (see check list above), and about income generating productive activities.
3. What home improvements the occupants would like to see (what has not been possible under present circumstances because of location or lack of resources etc.; what families would like); what aspects cause them concern (security, health and hygiene, etc.);
4. What the income generation / productive activities of the family and individuals are, and what skills might be useable in the new location (where it concerns migrant households). For all households, where it is likely that an income generating activity is undertaken in or near the home (such as a home based workshop, or a trading stall) one should aim to get an indication of the space needed, in the case where the household being interviewed is likely to carry on the same sort of activity in the future. For

# SEASONAL - SPACE / ACTIVITY RELATIONSHIP

note:  
write(S) for  
summer use

write (W)  
for winter  
use

		ACTIVITIES														
		Check Existing Spaces	Family Meeting	Meet Guests	Eat	Sleep	Prepare Meals	Wash Clothes	Bath	Work	Animal Keeping	Grow Food (Garden)	Store Goods	Play Children	Study	Other
LIVING SPACES	Room 1															
	Room 2															
	Room 3															
	Room 4															
	Room 5															
	Room 6															
	Kitchen (K)															
	WC															
	Bath (B)															
	Storage (S)															
	Covered Shaded Area (Aivan) (A)															
	Court/yard (C)															
	Workshop Office etc. (W)															
	Animal Shelter (AS)															
	Commercial (C)															

households living in Surendranagar already, and for the third group of households living in socioeconomic conditions similar to those expected in Surendranagar, questions should also be asked about past activities and situation: have they moved here from somewhere else; where were they before; why did they move; what was their economic activity; how has this changed; and what impact has this had on the way they live and the house they live in?

5. Opinions about the type of services they have and their acceptability.

## Survey design and technique.

### Questionnaire design - format

7. Occupation		9	8	7	6	5	4	3	2	1	Head of Hsehold
a) Employee Government	permanent										
	regular										
	temporary irregular										
b) Employee Public Sector	permanent										
	regular										
	temporary irregular										
c) Employee Private Sector (formal)	permanent										
	regular										
	temporary irregular										
d) Employee Private Sector (informal)	permanent										
	regular										
	temporary irregular										
e) Employee Agriculture	permanent										
	regular										
	temporary irregular										
f) Family Business	permanent										
	regular										
	temporary irregular										
g) Pedlar	permanent										
	regular										
	temporary irregular										
h) Individual Craftsman	permanent										
	regular										
	temporary irregular										
i) Own Farm	permanent										
	regular										
	temporary irregular										
j) Unskilled Unspecified	permanent										
	regular										
	temporary irregular										
k) School											(2)
l) Other specify	permanent										
	regular										
	temporary irregular										

The survey questionnaire form should, as far as this is possible, be made up in a form where answers can be recorded with a tick or one word, in order to simplify collation and analysis of results. The total number of questions should be kept as low as possible.

### Questionnaire design - content

A key point to bear in mind in designing the questionnaire is that the information being sought must relate directly to particular issues or questions. The temptation is either to seek a spread of "horizontal" data not all of which is directly relevant and which is then - dangerously - interpreted post-questionnaire as if it related directly to specific issues, or to obtain a level of detail of "vertical" data which is not required. To take a simple example, the age of house-occupants is almost invariably of relevance in this type of household survey, but the exact issue being addressed should dictate the actual data sought: i.e. why is age relevant? if it is because the needs of the very young and very old modify space use, then age "bands" are probably sufficient (limited "horizontal" data).

### Questionnaire - techniques for obtaining accurate responses

The manner in which the question is phrased and put is equally important. For example, if a question is impersonally read from a form or notes, and particularly if it is worded in a way which invites a "yes" or "no" answer, then people may respond in a correspondingly impersonal way, and project the answer they would wish to be able to give even if not quite accurate, or that they believe the questioner wishes to hear; these answers will not necessarily correspond to the reality. It is better, time permitting, to develop a discussion about space use, or activities, and through the discussion find out what happens; the interviewer listens, guides the discussion, and records the

answer on the form, always, however, checking that the answer recorded is agreed (e.g. "So you in fact only use this area in the summer months - is that right?"). As suggested above, doing the interview with more than one household member gives good results, and also provides a reasonable cross-check on the accuracy of the information.

### *Collation*

The surveys for each of the three survey target groups could be collated separately and then compared: groupings of similarity, (types of occupation, size of family, types of space being used. Questionnaire data can be collated on computers, to give percentage figures for the results; the space use diagrammes would more easily be collated manually, since essentially the information is visual, and can be developed into synthesis diagrammes classifying the information into groups of similarity.

### *Pre-survey training*

As far as possible all team members undertaking the survey should be given pre-survey training at the same time. Typically they might begin by trying the survey out in small groups on each other (and role-playing awkward or untypical householders), thus identifying possible areas for inconsistency in interpreting or recording data and agreeing on how these should be handled. It should also be possible to work out at this stage approximate time checks for each section of data, so that the team member can monitor if he/she is taking too long. Prior to undertaking the main survey, a small sample survey should be undertaken to give the team the opportunity to check out these points, following which a second - probably shorter - discussion session should be held at which the survey designers have the chance to make any last minute modifications to the survey forms and procedures.

### *The trial survey*

Each team could survey two or three households during the trial survey. They should then participate in collating the data, so that there is an opportunity to see how the collected material is transformed into useable material.

### *Survey team composition.*

Surveys should be undertaken by two person teams rather than individuals - firstly because this allows the two team members to check between each other on what they have seen and heard - and there are often different interpretations - and it allows the two types of survey - visual and questionnaire - to be undertaken simultaneously and thus more quickly in each house.

The visual survey should be undertaken by someone with an architectural background, typically an architectural student. The questionnaire survey should if possible be undertaken by someone with some previous experience of conducting household surveys.

If there are 400 households to be relocated in Surendranagar, the survey of all 400 families (150 in Surendranagar and 250 migrant families) could be undertaken by 8 to 10 teams in about 10 days, depending, obviously, on how dispersed the target families are and how much travel time would thus be needed. In addition, time needs to be allocated for surveying the 'group 3' families who are to give background information on potential socioeconomic and activity change.

### *Development of the survey.*

The next stage is to develop a draft survey document, which should include the following items:

- \* the survey materials themselves - forms and questionnaires which will be filled in during the survey for each family;
- \* a document giving instructions for each survey team on how to carry out the survey;
- \* a document suggesting how the survey material will be collated.

Once this draft material has been developed, Development Workshop will then review the material, and suggest if needed ways in which it could be changed. This review provides, amongst other things, a chance for an objective view of the survey material and an assessment of the way the questions are asked.

### *Credits:*

Page 5. 'Mathare Valley. A case study of uncontrolled settlement in Nairobi' HRDU, Nairobi

Page 6. 'Indigenous building of the Caspian Region' Development Workshop.

Page 8. 'Survey form for Informal Housing Sector Study, Egypt' Development Workshop

Page 10. 'Urban Projects manual' Clifford Culpin & Partners.