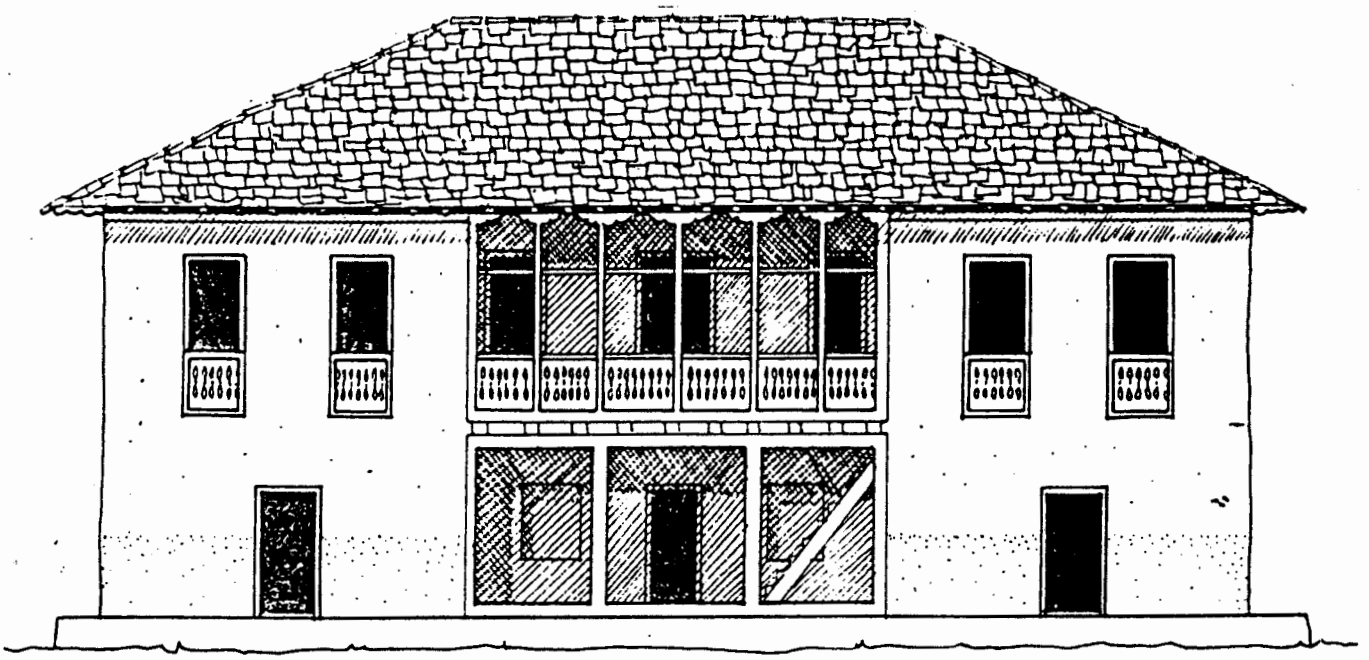
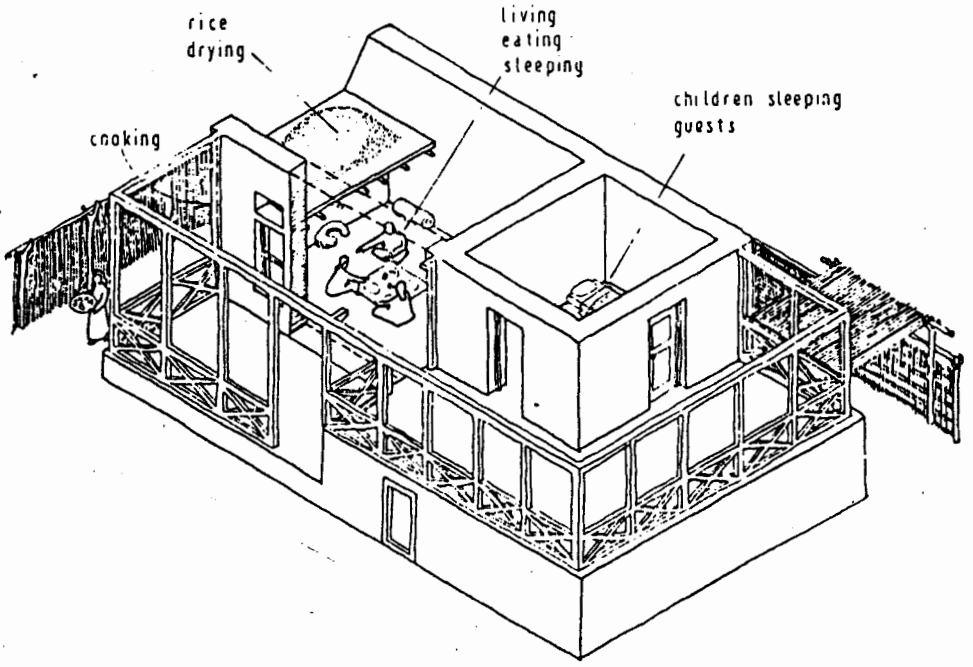
The Indigenous Building of THE CASPIAN REGION

Vol. 1





Development Workshop

Methodology

This report has been produced from the analysis of research carried out in the study region, and from the documentation of existing literature concerned with the study area.

The organization of the research has been based upon a matrix, relating aspects of the built environment: settlement distribution, settlement pattern, house form and elements of the house; to a set of determinants which influence the built environment: geography, climate, hydrology, history, socioculture, economics and building resources. It is the interrelationships of these determinants which, combined, shape the built environment. Furthermore, the built environment should not be considered as being in a static condition, since each aspect of it is constantly changing. Hence, the determinants have also been considered within a time scale, which helps one to see not only how, but also why elements of the built environment have changed and will continue to do so.

The information in the Caspian Region was gathered on three broad levels: visual observation, physical surveys, and case study interviews.

While travelling through the region, visual observations on changes in house types, building materials, settlement pattern and distribution, as well as topography and land use, were recorded in writing and small illustrations, taking the form of Route Notes. This information was also documented photographically. Similar visual observations were recorded on settlements and houses. This material has provided a valuable broad reference to the whole region.

Settlements were selected at regular intervals throughout the region and physically surveyed. The settlement pattern was

drawn up and observations were made on the local topography, climate, water resources, social characteristics, defense measures and building resources, at the same time noting what influence these have had on the form of the settlement. This information was recorded on a settlement observation sheet (see following chart). In each settlement several representative houses were selected for detailed survey and many others were sketched and photographed. Plans, sections and elevations were measured and drawn up, and a house observation sheet (see following chart) on space use and building technology was filled in.

In the houses surveyed an interview on various aspects of the settlement and the house was held, usually with the head of the family (see House Interview Sheet). These interviews, in addition to providing detailed current information, also provided much of the local historical information and details on the development of the house and settlement.

Based on a preliminary study of the region, physical surveys and interviews were conducted on local building and production industries, complementing the information collected on houses and settlements(see Building materials production questionnaire). Whenever possible, local builders were interviewed in addition to the house surveys and interviews. Builders were asked to demonstrate or explain particular local building methods and their opinions on various building materials and techniques were obtained, as well as comparative costs. A questionnaire was used for recording information on specific building methods (see following chart).

Samples of building materials have also been collected and analysed.

In parallel to the field research, articles and books with re-

ference to the Caspian Region and this particular study were extensively documented in Farsi, French and English. This material has been particularly valuable in completing the historical perspective for the region, and in tracing the development of building methods and materials.

No.	Place	Date

INFLUENCES	COMMENT
TOPOGRAPHY	
CLIMATE	
WATER	
SOCIAL	
DEFENCE	

HOUSE OBSERVATIONS

No.	Place		Date
ACTIVITIES	SUMMER	WINTER	GENERAL COMMENTS.
Sleeping			
Cooking			
Eating			
Family			
Guests			
Store			
Animals			
TECHNOLOGY	COMMENTS		
Structure			
Floor			
Walls			
Roof.			

SETTLEMENT QUESTIONAIRE

No.	Place		Date	COMMENT
POPULATION	Per Household	Households	Total	
ETHNIC GROUP				
ECONOMY	Activity	Product		
OCCUPATION	Owner	Employer	Worker	
	Trader	Craftsman	Builder	
	Agriculture	Husbandry	Migrant	
	Other			
MIGRANT WORKERS	No.	Period	Place	
	Occupation			
LINKS WITH MAJOR SETTLEMENT (market)				
AGE (history)				
BUILDING MATERIAL SOURCE	Timber	Brick	Tile	
	Other			

No.	Place		Date	COMMENT
POPULATION	Per Household	Households	Total	
ETHNIC GROUP				
ECONOMY	Activity	Product		
OCCUPATION	Owner	Employer	Worker	
	Trader	Craftsman	Builder	
	Agriculture	Husbandry	Migrant	
	Other			
MIGRANT WORKERS	No.	Period	Place	
	Occupation			
AGE (history)				
PROVISION OF HOUSE	Self Built	Builder Built	Bought	Rented
REQUIRED IMPROVEMENTS				
PREFERRED NEW HOUSE TYPE.				

MATERIALS PRODUCTION CHECK LIST

Item — Local name

Location — Name of Interviewee

Cost per unit now — previous cost - 5 years — 10 years

Production method

Production rate

No. of workers, activity, wage

If seasonal, other occupation

Source of labour

Where kiln used, no. of bricks/tiles per firing

No. of firings per month

Process of firing - time/labour for laying, firing, removal, etc.

Type, source, & cost of fuel, quantity per firing

Lifespan of unit

Delivery cost to consumer

Source of raw material — cost

Ownership — name

No. of kilns/workshops etc. in area — in village

Is production increasing/decreasing, etc. — why?

Limits to area of production — why?

Reasons for particular form/shape of unit

Comparison with other forms

Comments

CONSTRUCTION MATERIALS AND TECHNOLOGY CHECK LIST

Name of place — Name & place of builder

Name of material — local name

Uses of material : wall, roof, floor, others

Production method : small kiln, mass prod., on site, others

location of plant

ownership of production plant

consumer's cost per unit of material (specify unit)

Cost of construction

Time in production

Time in construction (per m2)

Labour requirements in production

Labour requirements in construction & organization

Specialist requirements

Life span of material

Maintenance requirements

Problems of materials

Construction difficulties

Comments

The development of educational facilities planned within the context of social structure, involving community participation and using appropriate technology for their construction.

Paper title

Introducing appropriate technology into the design of educational buildings and furniture

John Norton

Prepared for the Educational Facilities Section,
Division of Educational Policy and Planning.
UNESCO, PARIS

INTRODUCING APPROPRIATE TECHNOLOGY INTO THE DESIGN OF EDUCATIONAL BUILDINGS AND FURNITURE

JOHN NORTON - 9 SEPTEMBER 1979

It is first necessary to define what is meant by an 'appropriate' technology. An appropriate technology should be one that is relevant to, and responsive to, the local social, economic, environmental and cultural conditions. It should be a technology which can be used and afforded by a community or an individual family.

The basis for identifying appropriate technologies can most often be found through an understanding of indigenous materials and systems. These are the product of, on the one hand, local resources and conditions, and on the other, the accumulated expertise in how best to solve the problems and develop the potentials of these resources and conditions.

It is important to realise that indigenous methods are an evolving process, and, as such, should not be considered as underdeveloped and retrogressive.

However, the potentials of indigenous methods have been largely neglected and have instead been replaced by methods borrowed from, or imposed by, the developed countries; methods which are often inappropriate to local conditions and needs. The visible material success of the industrialised world has made these new methods an obvious desirable model for Third World countries.

The drawbacks of this situation have not only been detrimental to the community in environmental, social, cultural, economic and aesthetic terms, but also detrimental to the governments of Third World countries that have to pay high prices for the import of technology, materials and expertise to try and meet the national and regional demand for facilities.

Furthermore, many of the indigenous skills that existed in the past have now been forgotten through lack of use. The benefits of redeveloping the use of indigenous technologies apply both to the nation as a whole and, more specifically, to each individual and the community.

In the context of this paper, therefore, the final aim is not simply the provision of a facility - a school building, but the general improvement in the quality of the built environment in a way that does not overtax the capabilities of a country's human, financial and physical resources.

The programme outlined in the following pages culminates in building an educational building but this building should serve to demonstrate the potentials of resources and systems available to the local community. The building can, therefore, be seen as an educational tool, as well as a place where other forms of education take place.

The programme is presented in four stages. Each stage sets out to show how the work should be carried out, and what the purpose is. Each stage is accompanied by a check list

(or lists) which serves two functions; one, as a reminder and guideline for those involved in the practical implementation of each stage; and two, to enable information and experiences to be recorded and then circulated, so that others can benefit, and both decision makers for the same area and people facing similar problems in other areas can perhaps avoid making or repeating some of the mistakes that have already been made and can optimise the successes and potentials.

The check lists can also be used as a format for recording research, training and building experience or information which has already been done.

The four stages are as follows:

a. Research and development of the indigenous building methods, materials, local skills and resources.

b. Training workshop for local builders and artisans.

c. Stimulation, improvement or establishment of locally based materials or elements production.

d. Building of schools; applying the knowledge and resources gained in stages 1 - 3 in practical building projects.

A. 1. Research and development

Programme to assess the potentials and problems of indigenous building industry* in a region.

The aim of this stage is to collect and understand, for each case study area, information about the indigenous materials, systems and forms, and the context within which they are found. Through this understanding, one can better identify what technologies or solutions will be appropriate in any future building in the area.

A. 2. The gathering of information is primarily a field study programme. However, a great deal of information can be collected through existing documentation and statistics, which serves as a back up to the main part of the research.

Statistics or records are available for most countries; the following should be collected.

(a) Climatic data: collect from local meteorological stations and fill in the chart (1.1) for each station.

(b) Population figures: density and distribution.

(c) Public and industrial facilities, and transportation networks. This information should be provided on a map of the area.

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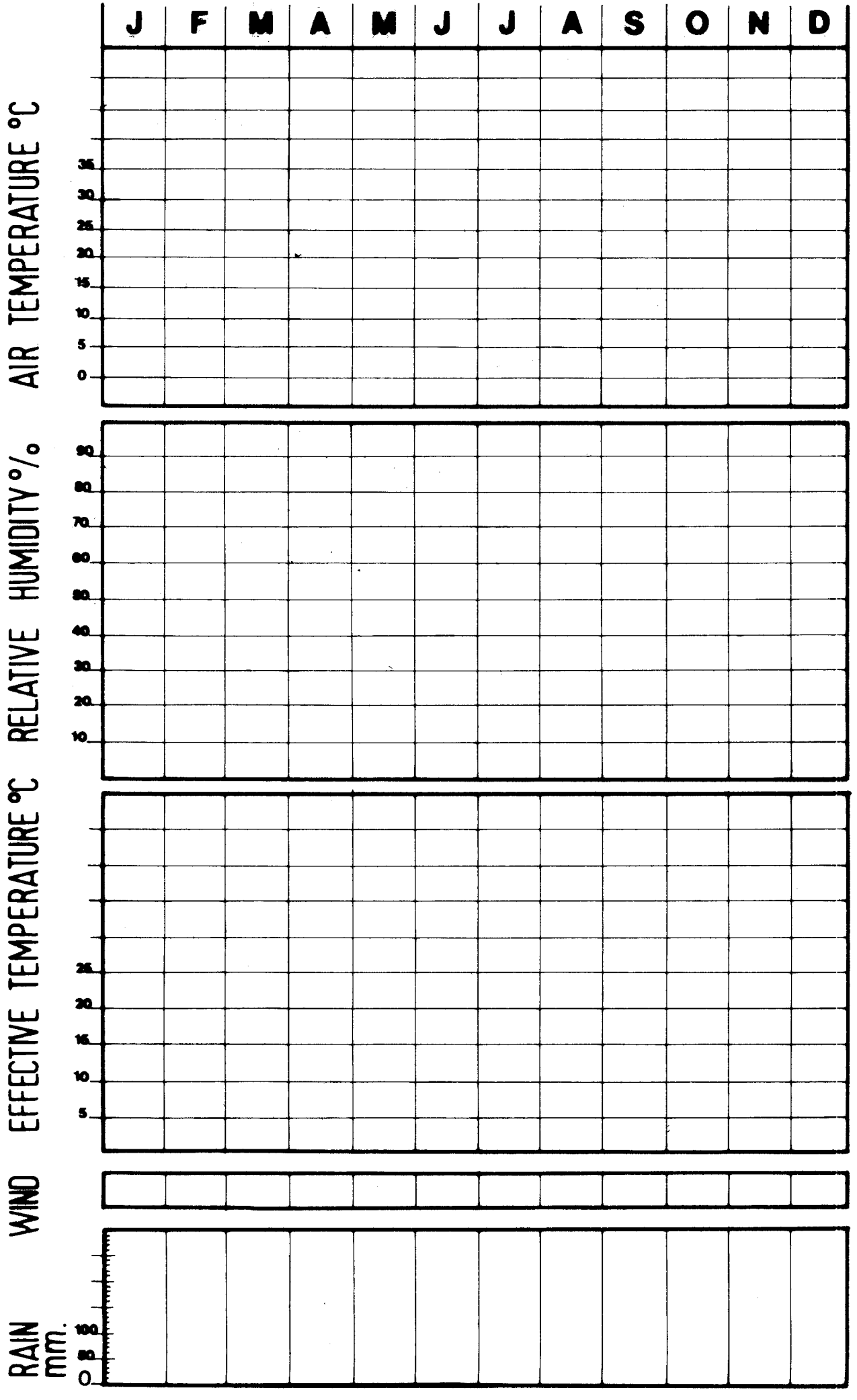
* The indigenous building industry - meaning those materials, techniques and other resources used by people in a locality, and readily available to those people, with an emphasis upon solutions which are relevant and responsive to the local social, economic, environmental and cultural conditions.

CLIMATE CHART 1-1 LOCATION:



A. 3. Collect or record the existence and content of any literature relevant to the study area and programme. Libraries and university theses will provide much of this information. Where detailed studies have already been done, this may reduce the amount of field research required.

A. 4. The research outlined here is based upon a matrix, relating aspects of the built environment: settlement distribution, settlement pattern, house form and elements of the house; to a set of determinants which influence the built environment: geography, climate, hydrology, history, socio culture, economics and building resources. It is the interrelationships of these determinants which, combined, shape the built environment.

Both general observation in the study area and detailed surveys or interviews, should be conducted and information recorded with this in mind.

The check lists which follow are based upon this matrix.

A. 5. Visit the study area and make observations, using check list (1.2), and record any additional information in the form of route notes. Route notes are notes taken <u>whilst</u> travelling through a region, based upon observation, and should record the nature of the built environment, and note those determinants which help to shape it.

These notes will provide a basic overview of a large area, and will help to identify those areas requiring detailed study.

(This observation process can be carried out independently f om the rest of the programme, by people visiting or working in areas for which there is little existing information, and for which specific studies have not been carried out.) Written information should be supported by photographs and sketches.

A. 6. From the information collected in 1.5, distinguish the variations of the built environment occurring in the area, and for each variation conduct a detailed sample study.

The sample studies should include:

1. Settlement or neighbourhood survey. Indicate by diagram or sketch, the settlement pattern, and the relative positions of public facilities - café, shopping area, schools, religious buildings etc., as well as basic street pattern.

   Using the settlement observation sheet (1.3) record any relevant influences on the settlement.

2. Select sample buildings which are typical of local style, use of materials, or technology, and
   (a) do simple physical survey to show form of building (paced dimensions are sufficient).
   (b) by observation and interviewing the occupier/ user, fill in check list (1.5) (Building Survey Check List).

(c) identify any special features and sketch, (also photograph) and record explanation of purpose and how operated.

3. With the assistance of local builder(s) record details of local materials, their use, and local building technologies. Sketch details, process (and photograph) and fill in construction materials and technology check list (1.6).

4. With the assistance of local builder or producer, record details of materials or elements production. Sketch and photograph details, process and fill in Materials and Element Production Check List (1.7).

OBSERVATION DATA CHECK LIST 1.2.

WHILST TRAVELLING, RECORD OBSERVATIONS ON FOLLOWING ITEMS AS WELL AS ANYTHING OF ADDITIONAL RELEVANT INTEREST.

REGION..... COUNTRY

STARTING POINT & DESTINATION OF JOURNEY & ROUTE IDENTIFICATION

RECORD CHANGES LOCATED TO PLACES OR DISTANCES TRAVELLED.

TOPOGRAPHY (LAND FORM)

LAND TYPE (e.g. Marsh, rock, desert, etc.)

LAND USE (Natural and man-made)

COMMUNICATION (Roads, rivers, etc. and condition)

SETTLEMENT DISTRIBUTION (e.g. many small villages, few large towns)

SETTLEMENT PATTERN (e.g. Clustered, linear, fortified, etc.)

SERVICES (electricity, water points)

BUILT FACILITIES (Schools, factories, etc.)

MATERIALS PRODUCTION (Sawmills, brick kilns, etc.)

HOUSE FORM (Roof, walls, openings, number of floors)

ORIENTATION

MATERIALS (For walls, roof)

CLIMATIC CONTROLS (wind breaks, flood control)

EVIDENCE OF HAZARDS TO BUILDINGS (signs of earthquake, landslide, storm damage)

NOTE MATERIALS & FORM OF OLD BUILDINGS AND NEW

SETTLEMENT OBSERVATION CHECK LIST 1.3

No.	Place	Date
INFLUENCES	COMMENT	
TOPOGRAPHY		
CLIMATE		
WATER SUPPLY		
SOCIAL FACILITIES		
DEFENCE FEATURES		

SETTLEMENT/NEIGHBOURHOOD QUESTIONNAIRE 1.4

PLACE REGION COUNTRY

POPULATION No. OF HOUSEHOLDS

ETHNIC GROUP MAJOR CULTURAL CHARACTERISTS (e.g. RELIGION)

HISTORY & AGE OF SETTLEMENT..... ECONOMIC BASE.....

ACTIVITY PRODUCT

HUMAN RESOURCES: No. OF BUILDERS, CRAFTSMEN, OTHERS (SPECIFY)

MIGRANT WORKERS: SEASON FROM WHERE TO WHERE?

OCCUPATIONS?

PHYSICAL RESOURCES - (WORK PLACES, FACTORIES, SCHOOLS, BATHS etc.)

ROAD LINKS (TO WHERE)

IS THERE: ELECTRICITY..... PIPED WATER.....

SEWAGE SYSTEM (TYPE).....

LOCALLY AVAILABLE BUILDING MATERIALS

STATE: TYPE, SOURCE, COST.

BUILDING SURVEY CHECK LIST 1.5

LOCATION REGION COUNTRY

TYPE OF BUILDING NAME, POSITION & OCCUPATION OF INTERVIEWEE

NO. OF ROOMS & FUNCTION

AGE (HISTORY)

PROVISION OF BUILDING: OWNER BUILDER; BUILDER BUILT; BOUGHT; RENTED

IS BUILDING AS ORIGINAL? IF EXTENDED, SPECIFY

WHAT IMPROVEMENTS REQUIRED

PREFERRED NEW BUILDING TYPE (MATERIALS, FORM etc.) WHY?

DESCRIBE FORM & MATERIALS OF:

- STRUCTURE
- FLOOR
- WALLS
- ROOF
- OPENINGS

WHAT PROBLEMS ARE THERE WITH THE BUILDING?

CONSTRUCTION MATERIALS AND TECHNOLOGY CHECK LIST 1.6

NAME OF PLACE NAME & PLACE OF BUILDER/OR INTERVIEWEE, STATING OCCUPATION

NAME OF MATERIAL/ELEMENT LOCAL NAME

USE OF MATERIAL/ELEMENT: WALLS, FLOORS, ROOF, OPENINGS, OTHERS - SPECIFY .....

NOTEWORTHY CHARACTERISTICS

PRODUCTION METHOD

PLACE OF PRODUCTION OWNERSHIP

CONSUMER'S COST FOR ITEM OR ITEMS .....

PRODUCTION ... COST TIME REQUIRED PER UNIT/M^2

COST OF CONSTRUCTION (M^2 or specify other unit) COST TIME

CONSTRUCTION METHOD

LABOUR REQUIREMENTS IN PRODUCTION. No. + ACTIVITY

LABOUR REQUIREMENTS IN CONSTRUCTION AND ORGANISATION No. + ACTIVIT

SPECIALIST REQUIREMENTS. No. ACTIVITY STATE NATURE OF INVOLVEMENT

LIFE SPAN OF MATERIAL/ITEM

MAINTENANCE REQUIREMENTS

PROBLEMS WITH MATERIAL/ITEM

CONSTRUCTION DIFFICULTIES

COMPARISON WITH KNOWN ALTERNATIVES:

WHAT IMPROVEMENTS SUGGESTED BY INTERVIEWEE

COMMENTS

ACCOMPANY BY SKETCHES

MATERIALS - ELEMENTS PRODUCTION CHECK LIST 1.7

DESCRIPTION OF ELEMENT.....SPECIAL CHARACTERISTICS.....

USE.....

LOCAL NAME

LOCATION.....SOURCE OF INFORMATION.....

REGION.....COUNTRY.....

SIZE OF PRODUCTION UNIT: LOCATION? ON BUILDING SITE OR PERMANENT SITE

PRODUCTION METHOD.....SPECIAL CHARACTERISTICS.....

EQUIPMENT USED COST

PRODUCTION RATE

ENERGY REQUIREMENTS SOURCE QUANTITY COST

No. OF PEOPLE INVOLVED IN PRODUCTION; ACTIVITY; WAGE

SOURCE OF LABOUR

IF SEASONAL, OTHER OCCUPATION

PERIOD OF PRODUCTION: (per year)

LIFESPAN OF ELEMENT

SOURCE OF RAW MATERIAL HOW TRANSPORTED COST

DELIVERY METHOD TO CONSUMER (IF PRODUCED AWAY FROM BUILDING SITE) COST

REASONS FOR PARTICULAR SHAPE/FORM OF UNIT

ADVANTAGES PROBLEMS

COMPARISON WITH OTHER ITEMS USED FOR SAME FUNCTION

OWNERSHIP OF PRODUCTION UNIT

IS PRODUCTION INCREASING/DECREASING? WHY?

No. OF PRODUCTION UNITS IN AREA.....IN COMMUNITY/ NEIGHBOURHOOD/VILLAGE.....

LIMITS TO AREA OF PRODUCTION WHY?

LIMITS TO AREA OF USE WHY?

WHAT IMPROVEMENTS SUGGESTED BY INTERVIEWEE?

COMMENTS:

PLEASE PROVIDE SKETCH OF SITE LAYOUT, WITH DETAIL SKETCHES/ PHOTOGRAPHS OF EQUIPMENT, PROCESS & PRODUCT AS APPLICABLE.

B. BUILDERS TRAINING WORKSHOP

INTRODUCTION In the process of stage 1, a number of builders and building related artisans will have been contacted. These people can form the basis for a builders training programme.

There are two closely inter-related aims to this programme; firstly, to develop indigenous building methods through the pooled knowledge and participation of local builders; secondly, to train these builders in practical and organisational skills so that they are equipped to meet the majority of local shelter needs without dependence upon special expertise brought in from outside, expensive non local materials or equipment.

A small group of participants should be gathered together, comprising those local people interested in the programme and in putting its results to practical use; architects (or similar) capable of organising and running the programme, and any specialist expertise that may be required (e.g. in an area where stone is an available wall building material, a skilled stone mason could participate for a few days.)

The methodology of the workshop is: learning through discussion, through practice, and through experimentation, based upon problem identification and problem solving by sharing knowledge. (This is as much a learning process for the specialist as it is for the local builder - when discussing local conditions, a local person is more likely to be the expert.)

B.2. Physical Requirements.

Two basic spaces are required - one for discussion + 'classroom' activities (which can be out of doors if the weather is suitable) and a yard where practical and experimental building work can be done. The size of both these spaces depends upon how many people will be using them at one time.

In addition the following will be needed:

- a blackboard and chalk
- sufficient seats or benches
- wheelbarrow
- shovels
- buckets
- water supply

Participants should provide their own specific equipment normally used by builders.

Materials and equipment for building will depend upon local conditions and resources.

B.3. Subjects that should be dealt with:

1. The problems and potentials of indigenous building and of community (village or urban) development.

2. Basic design principles - site choice, planning and orientation
   climate
   relationship of spaces and elements within a building

3. Reading drawings and laying out of buildings.

4. Foundations: for different soil and site conditions
   : for different building requirements.

5. Floors

6. Walls

7. Roofs

8. Openings

9. Special considerations - e.g. in earthquake areas, this should be discussed and relevant guidelines or practices established.

10. Literacy

Use the check list (1.8) as a guideline for the programme, and fill it in to provide a record.

BUILDERS/ARTISANS TRAINING WORKSHOP CHECK LIST 1.8

LOCATION REGION COUNTRY

No. OF PARTICIPANTS No. & TYPE OF PROFESSIONALS/EXPERTS

STATE PREVIOUS ACTIVITIES OF PARTICIPANTS AND WHAT EXPERIENCE THEY HAVE IN PROGRAMME SUBJECT.

WHAT FACILITIES WERE PROVIDED?

BY WHOM?

WHO FINANCED PROGRAMME? COST

WERE PARTICIPANTS

PAID	PAYING	UNPAID

?

STATE DURATION OF TRAINING PROGRAMME

BRIEFLY STATE: SIMS OF PROGRAMME

METHODOLOGY

SUBJECTS COVERED. SPECIFY TYPES OF MATERIALS USED

SPECIAL SUBJECTS COVERED

DESCRIBE ANY INNOVATIONS OR EXPERIMENTS INTRODUCED IN TRAINING PROGRAMME.

STATE: PURPOSE

WHO INTRODUCED IDEA AND WHERE FROM

RESULTS

ASSESSMENT FOR LOCAL USE

PROBLEMS + POTENTIALS

INDICATE DEGREE TO WHICH PROGRAMME SUCCEEDED; DIFFICULTIES ENCOUNTERED.

C. STIMULATION OF LOCAL MATERIALS AND ELEMENTS PRODUCTION

C. 1. The emphasis in this programme is placed upon the optimum use of locally available resources. Money for building projects should be channelled to the local community. Some of this money can be used to encourage, develop or create local building related materials or elements production centres - e.g. - Brick kiln - furniture making - manufacture of drain pipes. This not only has the material advantage of producing what is needed locally - it also helps to create new or increased job opportunities and ensures that the maintenance and replacement of worn out items in later years is a simplified local process.

UPGRADING OF EXISTING PRODUCTION

In Stage 1, existing local industries have been examined - some of these can be improved. This improvement may be organisation, added facilities or extra equipment, etc. e. g. Places which have horses or donkeys but no carts. Introduce a cart if the landscape is flat enough to make this a practical proposition and you increase the local market by enabling products to be moved around a larger area at low cost.

C. 2. For specific improvements to an industry, or for starting up a new industry, specialised assistance may be required. Contact UNESCO or craftsmen or 'experts' in neighbouring areas where this industry already exists and get advice or help.

Use the check list (1.9) to provide a record, and include any sketches or photographs which will illustrate or clarify what has been done.

LOCAL INDUSTRY OR PRODUCTION CHECK LIST 1.9

LOCATION.....REGION.....COUNTRY.....

NAME OF PRODUCT

WAS PRODUCTION UNIT IMPROVED/INTRODUCED? ..... PURPOSE OF INVOLVEMENT WITH THIS UNIT.....

WHAT IMPROVEMENTS* INNOVATIONS WERE INTRODUCED?..... EXPLAIN

WHO PROVIDED FUNDING? COST

STATE: OWNERSHIP OF PRODUCTION UNIT

STATE: PRODUCTION METHOD

QUANTITY OF UNITS PRODUCED PER DAY, WEEK ETC.?

IF IMPROVEMENT, HOW MANY PRODUCED BEFORE

WAS THIS PROGRAMME DIRECTLY RELATED TO SCHOOL BUILDING?.....

WILL PRODUCTION UNIT FUNCTION PURELY ON LOCAL DEMAND, OR IS CONTINUED ASSISTANCE REQUIRED. IF LATTER, COULD THIS BE CHANGED AND HOW?.....

WHAT IS THE COST OF ITEMS PRODUCED?

COMPARATIVE COST OF SIMILAR ITEM IN (a) ALTERNATIVE MATERIAL

(b) IN NEAREST AVAILABLE SOURCE

(c) TRANSPORT COST

HOW MANY PEOPLE EMPLOYED?.....DEGREE AND NATURE OF SKILL.....

HOW MANY ADDITIONAL WORK PLACES/JOBS PROVIDED?.....

IF UNSKILLED LABOUR USED, WAS TRAINING/INCREASE OF SKILL INVOLVED?.....HOW?.....

COULD THIS PROGRAMME BE REPEATED ELSEWHERE IN SAME REGION?

OTHER REGIONS?

WHAT PROBLEMS WERE ENCOUNTERED?.....

IF PROBLEM OVERCOME, HOW?.....

* DELETE AS APPLICABLE

D. PILOT BUILDING PROJECT - EDUCATIONAL FACILITY

Three stages have been initiated. This fourth serves a triple function:

1. It puts into practical use the experience and resources which have been made available in the previous three stages.
2. It directly involves the community.
3. It provides a facility - in this case an educational one - it could equally be a clinic, public bath or other local requirement.

Because the overall object of this programme is to assist in the improvement of the built environment, the design and nature of the pilot building should not only relate to the specific requirements which it is supposed to serve, but should also relate to the broader requirements of housing and other building and environmental considerations, serving as a model from which ideas and solutions can be taken and applied in other building.

The check list (1.10) for this stage should be used both as a guideline indicating aspects of the design, use of materials and building process which should be taken into consideration, and as a fromat for recording the process (with any successes or failures) so that the information can be shared by others.

PUBLIC BUILDING CHECK LIST 1.10

LOCATION.....REGION.....COUNTRY.....

DESCRIPTION OF PROJECT. (SUPPLY DRAWINGS OR PHOTOGRAPHS)

FACILITIES CREATED?

WHO CHOSE WHICH FACILITIES WERE REQUIRED?

STATE DEGREE & NATURE OF INVOLVEMENT BY - LOCAL PROSPECTIVE USERS/ COMMUNITY

LOCAL ARTISANS/BUILDERS

LOCAL OFFICIALS

GOVERNMENT OFFICIALS

INTERNATIONAL AGENCIES

WHO INITIATED PROGRAMME?

WHO WAS INVOLVED IN DESIGN - COMMUNITY? BUILDERS?

LOCAL PROFESSIONALS? (SPECIFY JOB)

FOREIGN PROFESSIONALS?

DESCRIBE NATURE OF INVOLVEMENT

WHO WAS INVOLVED IN THE BUILDING (e.g. what trades) AND WHERE FROM

WHO PAID FOR THE BUILDING AND HOW?.....

WHAT DID THE BUILDING COST?

DESCRIBE MATERIALS USED AND HOW?

STATE WHETHER LOCAL OR INTRODUCED (FROM WHERE)

IF INTRODUCED, STATE WHY?

COULD ALTERNATIVE LOCAL MATERIAL HAVE BEEN USED? WHY NOT?

DESCRIBE HOW BUILDING PROCESS WAS ORGANISED. (SUPPLY OF MATERIALS, ORGANISATION OF LABOUR, FINANCES etc.).....

WHAT MAINTENANCE DOES THE BUILDING REQUIRE?.....

WHO DOES MAINTENANCE?.....

BRIEFLY STATE LOCAL CLIMATIC CONDITIONS.

THE SELECTION OF AREAS FOR CONDUCTING CASE STUDIES

The common tendency is to divide the world up into convenient zones of climatic, religious, cultural, or other types of similarity. This classification, when related to a specific region, produces at the best a general idea of how local conditions may be. It does not take into account the local subtleties and variations. This is in many cases sufficient.

However, when attempting to build and design appropriately to a specific place, these micro variations become of considerable importance - suitable building materials can change completely over a distance of only 2 or 3 kilometres, as can aspects of design and location. These changes are often sensitive responses to micro climatic changes, or changes in topography, land use, or geological structure. This sensitivity becomes particularly important when the proposed building will not be relying upon expensive mechanical systems to combat unfavourable climatic conditions; it is equally important when attempting to build in a way which is relevant to the local socio cultural conditions.

In an ideal situation, detailed studies should be made for each locality in which a school building project is proposed. This may not always be possible.

For the purposes of gathering as much information and experience as possible, some form of generalised classification

will obviously help to identify which areas are more in need of attention, because little has been done already. A matrix of the following headings can be used to identify these areas, given that a change in any one of the items would indicate a potential change in the local build environment.

1. Climate
2. Topography
3. Geology
4. Vegetation
5. Land use
6. Ethnic, religious or cultural groupings sociology
7. Economic base - e.g. Fishing or a type of agriculture, or nomads, or industry
8. National economics and wealth of country
9. Politics
10. History - e.g. A basically peaceful society will often live in more scattered settlements and houses than one which has been frequently subject to attack
11. Natural disasters - e.g. Earthquakes - Hurricanes