

**DISASTER PREPAREDNESS AND REHABILITATION
IN BINH TRI THIEN PROVINCE (VIE/85/09)**

**SUBPROJECT N°3 :
DEMONSTRATION OF STORM-RESISTANT BUILDING TECHNIQUES**

TECHNICAL PROPOSAL

Mr. C-G. de Merode,
Chief, Contracts and Procurement Section,
UNCHS (Habitat),
P.O. Box 30030,
Nairobi,
Kenya.

8th August 1988

DISASTER PREPAREDNESS AND REHABILITATION IN
BINH TRI THIEN PROVINCE (VIE/85/09)

SUBPROJECT No. 3: Demonstration of
Storm-Resistant Building Techniques

Dear Mr. Merode,

In response to your request for proposals dated 29 June 1988, the present document is the TECHNICAL PROPOSAL for the above subproject.

The proposal is made jointly by Development Workshop and GRET (Groupe de Recherche et Echanges Technologiques).

We believe that the subproject should be regarded as a starting point. It will have little value if it is not replicated locally after the specialist input and UNCHS/UNDP support stage has been completed. Underlying this belief is the view that it is necessary for the subproject to address not only builders, but also mid-level technicians and policy-makers. At the same time builders play a key role and should be regarded as future "trainers".

We therefore propose the definition and testing of a method involving two "training loops" which can be tested in the course of the subproject and replicated after its completion. This method is proposed in two alternative approaches, Proposal A and Proposal B.

Given the range of audio-visual methods available, and the desirability of creating an integrated communication "package", the proposal also presents several audio-visual and communication options, Options 1 to 4.

For the purposes of negotiation and contact, GRET is nominated the lead group. All communications relative to the present proposal should therefore be addressed to the undersigned c/o GRET - Habitat, 213 rue La Fayette, 75010 Paris, France.

Yours sincerely,

John NORTON
on behalf of Development Workshop and GRET

Contents

SECTION 1 : INTRODUCTORY REVIEW

- 1.1 UNDERSTANDING OF THE NATURE OF THE WORK REQUIRED
 - 1.1.1 Objectives of the subproject
 - 1.1.2 Use of training workshops
 - 1.1.3 Raising institutional awareness
 - 1.1.4 Supporting material
- 1.2 REVIEW OF THE TERMS OF REFERENCE
 - 1.2.1 Objectives and scope
 - 1.2.2 The subproject environment
 - 1.2.3 The role of means of communication
 - 1.2.4 The training process
 - 1.2.5 Role of public buildings and demonstration buildings
 - 1.2.6 The perceived "value" of typhoon-resistance
- 1.3 THE OVERALL APPROACH : PROPOSALS A AND B

SECTION 2 : PROPOSAL A

- 2.1 PROPOSAL A
 - 2.1.1 Preliminary field analysis
 - 2.1.2 Preparation stage
 - 2.1.3 Administration/organisation stage
 - 2.1.4 Pilot builders' training workshop;
preliminary presentation of action plan
 - 2.1.5 Final production stage
 - 2.1.6 Construction of prototype building
 - 2.1.7 Preparation of second builders' training
workshop;
final proposition of action plan
 - 2.1.8 Second builders' training workshop
- 2.2 TIMETABLE FOR PROPOSAL A
 - 2.2.1 Timetable of activities
 - 2.2.2 Critical overruns

SECTION 3 : PROPOSAL B

- 3.1 PROPOSAL B
 - 3.1.1 Preliminary field analysis
 - 3.1.2 Preparation stage
 - 3.1.3 Administration/organisation stage
 - 3.1.4 Phase 1 technicians' workshop
 - 3.1.5 Phase 1 builders' training workshop;
 - 3.1.6 Phase 1 policy-makers seminar;
 - 3.1.7 Production stage
 - 3.1.8 Construction of prototype building
 - 3.1.9 Preparation of phase 2 workshops;
 - 3.1.10 Phase 2 (joint) policy-makers' and technicians' seminar
 - 3.1.11 Phase 2 technician's workshop (continued)
 - 3.1.12 Phase 2 builders' training workshop
- 3.2 TIMETABLE FOR PROPOSAL B
 - 3.2.1 Timetable of activities
 - 3.2.2 Critical overruns

SECTION 4 : OPTIONS FOR COMMUNICATION

- 4.1 OPTIONS FOR COMMUNICATION
 - 4.1.1 The right media
 - 4.1.2 The basic communication package
 - 4.1.3 The optional supplementary packages
- 4.2 OUTLINE FOR GRAPHIC AIDS AND MEANS OF COMMUNICATION
- 4.3 DETAILS OF AUDIO-VISUAL OPTIONS

SECTION 5 : GENERAL

- 5.1 OVERALL INPUT PLAN
 - 5.1.1 Team work
 - 5.1.2 Coordination
 - 5.1.3 Integration of the international and national inputs
 - 5.1.4 Level and extent of Vietnamese inputs
- 5.2 MANAGEMENT PLAN
 - 5.2.1 Relationship between member consortium
 - 5.2.2 Organisational structure for the subcontract team
 - 5.2.3 Budget control
 - 5.2.4 Timing control
 - 5.2.5 Quality control
- 5.3 CORPORATE EXPERIENCE STATEMENT - GRET
 - 5.3.1 Background
 - 5.3.2 Legal and administrative structure
 - 5.3.3 Prior and current work experience

- 5.4 CORPORATE EXPERIENCE STATEMENT -
DEVELOPMENT WORKSHOP
 - 5.4.1 Background
 - 5.4.2 Legal and administrative structure
 - 5.4.3 Prior and current work experience

- 5.5 TEAM BIO-DATA

SECTION 1 : INTRODUCTORY REVIEW

1.1 UNDERSTANDING OF THE NATURE OF THE WORK REQUIRED

Our understanding of the work required, as outlined in the Terms of Reference is as follows:

1.1.1 Objectives of the subproject

The overall objectives of the subproject are to define and initiate the process by which identified simple and low-cost methods for improving the resistance of "transition" buildings and small community buildings to typhoons can be disseminated and integrated into current building practice, particularly among local and "self-help" builders. This would reduce loss of life and injury and lower building repair/replacement costs which in recent disasters has been identified as high in those building types, and which in effect divert funds from other development activities.

1.1.2 Use of training workshops

To achieve this objective, the Terms of Reference propose that the subcontractor organise and run a number of workshops for local builders, in order to produce better trained builders and demonstration building prototypes to which the public and local authorities can refer.

1.1.3 Raising institutional awareness

At the same time, the subcontractor is to take positive action to raise the awareness of the Government institutions and departments on housing disaster preparedness, and to establish with them provincial and national action plans - through their existing institutional framework - to ensure that this awareness is translated into an active programme of housing and small buildings vulnerability reduction.

1.1.4 Supporting material

In carrying out these tasks, the subcontractor will produce supporting graphic material for use both during the proposed project and in future programmes, in the form of a builder's manual, and more generalised information aimed at public education and at Government authorities so that the latter know what action needs to be taken, both at the planning level and at the detailed and practical level.

1.2 REVIEW OF THE TERMS OF REFERENCE

1.2.1 Objectives and scope

The Terms of Reference in sum propose the organisation and running of a series of workshops for local builders on how to integrate simple low-cost measures designed to improve typhoon-resistance particularly in "transition" houses and small communal buildings. For this to achieve a significant impact the programme requires the organisation and running of a large number of such workshops and associated activities (demonstration building, local public information campaigns etc.).

→ Post-programme replicability is therefore a key issue. The present proposal aims to address this through the definition and testing of a method, capable of being implemented locally by the Vietnamese. For this to occur, it is necessary for the method to be intimately adapted to the subproject environment.

1.2.2 The subproject environment

The problem described in the Terms of Reference (1.2) is increasingly common, and not solely in the context of typhoons and other natural disasters. Departure from familiar and understood traditional techniques frequently results in building vulnerability not only because of local shortage of know-how, but also because of difficulties that occur given the availability of financial and material resources and the constraints of a given socio-cultural environment. The vulnerability of "transition" buildings often remains a problem even where know-how does exist because financial constraints and poor accessibility promote poor building practices and the use of sub-standard materials, or because cultural considerations modify their correct use.

It is therefore critical that the social, cultural and economic - as well as the technical - environment be well understood from the outset in order correctly to identify the real sources of vulnerability and to increase the likelihood of local replication of proposed solutions.

This understanding of the subproject environment is also crucial to the role of means of communication, the training process and the role of demonstration buildings.

1.2.3 Role of means of communication

Communication aids are an essential tool at each stage of the project. They can be oral, written, visual, audio-visual, interactive (such as prototypes etc.).

They must, however, be adapted to the local communication pattern, to the social target group (local builders, policy-

makers etc.), and to the objective in each instance (training, transfer of information, raising of awareness...)

It follows that by their very nature - being adapted to the local cultural context - they should preferably be designed in outline with Vietnamese programme participants, and then finalized by the subcontractor.

They are also much more efficient when they function as an integrated "package", each with a specific function within an overall structured objective.

1.2.4 The training process

Similarly, the Terms of Reference imply that the objectives can be adequately achieved through a process essentially of informing local builders and authorities, albeit in collaboration with local government agencies.

Our experience suggests, however, that it is important to associate end-users in the decision-making process, i.e. enabling their informed choice. This not only validates - through their participation - the technical or other solutions adopted, but also increases the sense of commitment and incentive of those concerned, thereby vastly improving the likelihood of replication or continuation. This latter benefit is particularly significant in the context of Government agencies and policy-makers.

1.2.5 Role of public buildings and demonstration buildings

As part of the broader communication "package", the use of public buildings for demonstration presents a number of advantages over smaller constructions:

- their technical complexity and their size offer the chance to use a wide range of typhoon-resistant techniques;
- they allow "on-the-job" training of builders;
- their cost is absorbed by local authorities: the overheads inherent in any innovation are absorbed not by the people;
- they represent a symbol of "modernity" and play a positive role in motivating the local population, particularly young people;
- they represent a not inconsiderable market for local products and help to strengthen local production networks etc.

They should therefore be regarded as an integral part of both the training and the communication process, and as a key factor in promoting replicability.

1.2.6 The perceived "value" of typhoon-resistance

A key factor in the issue of replicability is the "value" placed on typhoon resistant building techniques in the scale of priorities used by local builders and house owners in deciding how to use those resources which are available to meet potentially competing demands. This "value", or perceived priority rating, should be assessed both from the outset and during the subproject and specifically addressed in the training and communication processes.

The present proposal addresses these issues both through a preliminary analysis of the subproject environment and in its methodology.

1.3 THE OVERALL APPROACH : PROPOSALS A AND B

Bearing in mind the above comments on the Terms of Reference, two alternative approaches have been developed. Both meet the objectives and the task and output requirements of the Terms of Reference.

The following table summarises these two proposals and the key differences between them. Proposals A and B are then detailed in Sections 2 and 3 respectively.

<u>PROPOSAL A</u>	<u>PROPOSAL B</u>
<u>OBJECTIVES</u>	
TRAINED LOCAL BUILDERS	JOINTLY DEFINED TRAINING METHOD; DEVELOPED TRAINING SKILLS
INCREASED AWARENESS	ACTION PLAN ESTABLISHED; METHOD, TOOLS AND SKILLS
<u>METHODOLOGY</u>	
PILOT BUILDERS' WORKSHOP; PROTOTYPE BUILDING; SECOND BUILDERS' WORKSHOP.	PILOT BUILDERS' WORKSHOP; TECHNICIANS' WORKSHOP; POLICY-MAKERS' SEMINAR; PROTOTYPE BUILDING (DESIGNED BY TECHNICIANS); SECOND SERIES OF SEMINARS AT ABOVE THREE LEVELS; PUBLIC EDUCATION CAMPAIGN.
<u>DURATION AND TIME INPUTS</u>	
49 WEEKS 23.5 MAN WEEKS INPUT	56 WEEKS 37.5 MAN WEEKS INPUT
<u>RESULTS</u>	
TRAINED BUILDERS; DEMONSTRATION BUILDING; WORKSHOP METHODOLOGY AND TOOLS; EDUCATION CAMPAIGN PLAN & MEDIA; PROVINCIAL/NATIONAL ACTION PLAN.	PROVINCIAL/NATIONAL ACTION PLAN; DEMONSTRATED POLICY; METHOD, TOOLS AND SKILLS FOR IMPLEMENTING POLICY; TRAINED BUILDERS; DEMONSTRATION BUILDING; TECHNICIANS TRAINED FOR DESIGN AND TRAINING; QUALITY CONTROL, STANDARDS.
	CONTD.

PROPOSAL AKEY DIFFERENCESPROPOSAL B

EASE OF IMPLEMENTATION;
ADDRESSES - LOCAL BUILDERS.

MORE COMPLEX ORGANISATION;
ADDRESSES - LOCAL
BUILDERS,
- TECHNICIANS,
- POLICY-
MAKERS.

"TRAINING AS INFORMING" -
RISK OF LOW APPROPRIATION

"TRAINING AS ENABLING
INFORMED CHOICE" -
PROMOTES HIGH
APPROPRIATION.

POTENTIAL LOW LONG-TERM
BENEFIT FROM CONTRACTOR
INPUTS

POTENTIAL HIGH LONG-TERM
BENEFIT FROM CONTRACTOR
INPUTS

TRAINED BUILDERS REGARDED
AS FUTURE TRAINERS

ALL LEVELS IMPLICATED FOR
REPLICATING PROGRAMME &
KNOWLEDGE.

SECTION 2 : PROPOSAL A

2.1 PROPOSAL A

The main stages of Proposal A are listed below. The stages are detailed in the following pages of this section. A summary timetable and details of inputs are given at the end of the section.

phase 1

2.1.1 Preliminary field analysis

2.1.2 Preparation stage

2.1.3 Administration/organisation stage

2.1.4 Pilot builders' training workshop; preliminary presentation of action plan

2.1.5 Final production stage

feedback

2.1.6 Construction of prototype building

phase 2

2.1.7 Preparation/organisation stage of second builders' training workshop; final proposition of action plan

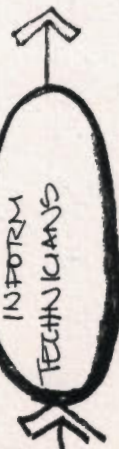
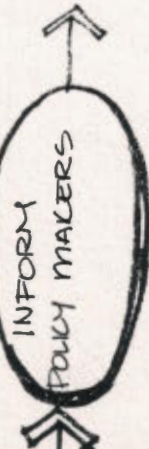
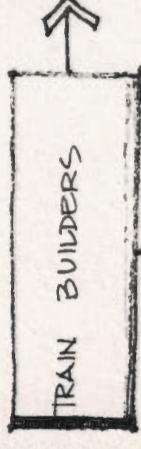
2.1.8 Second builders' training workshop; handover of manual and other education materials

The following page shows the overall concept of Proposal A.

TRAINING BUILDERS. DEMONSTRATION OF TECHNIQUES

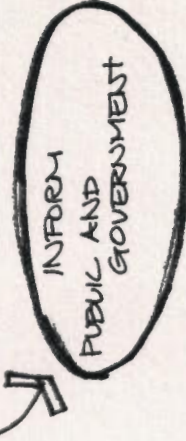
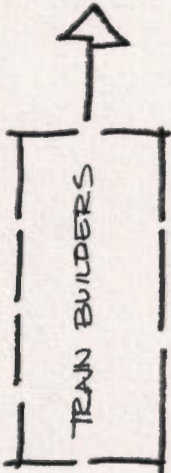
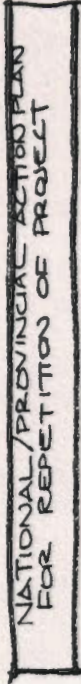
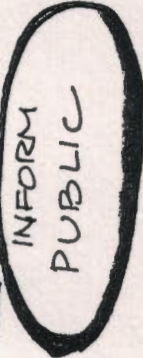
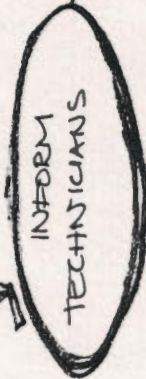
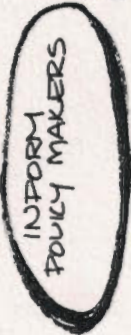
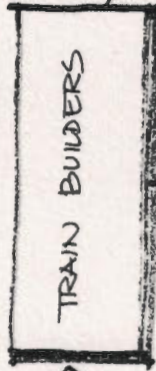
Proposal A

FIRST WORKSHOP



LESSONS FROM PROTOTYPE BUILDING

FINAL WORKSHOP



PHASE 1

UNDP SUPPORTED PROGRAMME

PHASE 2

PROVINCIAL / NATIONAL ACTION

... PROPOSAL A ...

2.1.1 Preliminary field analysis

Objective

- identify and analyse the key issues of the subproject environment - technical, economic, socio-cultural - which will largely determine its detailed implementation.

Content

- analysis of traditional and "transition" building construction: the materials used, the techniques, the levels of skill and know-how, the building process;
- analysis of cyclone damage (where currently visible), points of weakness and causes;
- reconnaissance of institutional set-up and target groups for workshop; preliminary identification of participants and their number;
- analysis of potential means of disseminating information;
- preliminary choice of scale and type of prototype building; location of prototype building; location of workshop;
- analysis of materials availability/cost/acceptability.

Methodology

- detailed liaison with counterparts, contact with other bodies concerned with the project; data analysis of environmental conditions;
- field analysis through observation, informal interviews, structured interviews where appropriate;
- feedback and synthesis of results with counterparts;
- outline presentation to Vietnamese counterparts and authorities of conclusions and implications for subproject implementation.

Results

- understanding of key factors in subproject development and implementation;
- agreement by Vietnamese counterparts and authorities to conclusions and implications;
- initiation of administration/organisation of workshop etc;
- inception report to UNCHS.

Duration

- 3 weeks

Location

- Vietnam

... PROPOSAL A ...

2.1.2 Preparation stage

Objectives

- preparation of preliminary report;
- preparation/production of programmes/materials etc. for future stages.

Content

- summary of findings of the field analysis of the subproject environment;
- design for pilot workshop;
- suggestions for pilot workshop participants;
- design for prototype building and location;
- pilot workshop training materials and documentation;
- checklist of action required by Vietnamese counterparts or authorities with deadines;
- outline provincial and national action plan.

Results

- outline design for prototype building;
- training materials for pilot builders' training workshop;
- action plan for organisation and administration of workshop;
- draft provincial and national action plan.

Duration

- 3 weeks

Location

- France

... PROPOSAL A ...

2.1.3 Administration/organisation stage

Objective

- Ensure that pilot builders' training workshop is run to plan.

Content

Action by Vietnamese counterparts and associated authorities:

- acceptance of workshop plan recommendations;
- purchase of materials etc. for pilot builders' training workshop;
- finalisation of list of participants for pilot workshop;
- administration of pilot workshop preparation (location, etc.)

Final field preparation by team member.

Duration

Action by Vietnamese counterparts and associated authorities:

- as necessary to meet stated deadlines.

Final field preparation by team member:

- 1 week.

Location

- Vietnam

... PROPOSAL A ...

2.1.4 Pilot builders' training workshop; preliminary presentation of action plan

Objective

- train local builders in appropriate methods and techniques of typhoon-resistant building, particularly with respect to "transition" houses and small communal buildings;
- test training methods appropriate to such techniques etc.;
- assess reaction of trainees to new ideas presented, this being one indicator of local acceptability and replicability;
- define detail for prototype building;
- preliminary presentation of action plan.

Content of workshop

- appropriate presentation of the problem and principles of typhoon-resistant building techniques with potential for local application;
- selection of prototype techniques with participants;
- small-scale building exercises with trainees;
- on-the-job training for counterparts.

Methodology of workshop

- aural/visual presentation;
- led discussion to check understanding of key problems and of potential solutions;
- joint group selection of prototype solutions using appropriate structured discussion techniques;
- on-the-job training of builders through small-scale building exercises;
- joint end-workshop evaluation.

Activity in parallel

- presentation of draft action plan with counterparts.

Results

- first group of trained builders in selected techniques for typhoon-resistant building;
- prototype building design selected;
- outline agreement to draft action plan.

Duration

- 3 weeks

Location

- Vietnam

... PROPOSAL A ...

2.1.5 Final production stage

Objectives

- ensure appropriateness of audio-visual materials, manual etc.;
- produce final versions of programmes etc. for future stages.

Content

- finalize action plan and public education materials;
- revise and finalize workshop programme;
- finalize prototype design.

Methodology

- evaluation/synthesis of earlier stages of subproject;
- revision of workshop programme, prototype design, plans of action (see 2.1.2 above);
- feedback of revised proposals to Vietnamese counterparts and authorities;
- repeat revision/feedback as necessary;
- finalisation and production of masters of communication materials etc.;
- large-scale production in Vietnam by counterparts and associated authorities of communication materials etc.

Results

- agreed and appropriate final versions of
 - * basic audio/visual material;
 - * manual;
 - * other training/communication aids as appropriate;
 - * detail design of prototype building and construction dossier;
 - * detail action plan.

Duration

Action by Vietnamese counterparts and associated authorities:

- as necessary to meet stated deadlines.

Team members:

- 4.5 weeks.

Location

- Vietnam (counterparts/authorities etc.)
- France (team members)

... PROPOSAL A ...

2.1.6 Construction of prototype building

Objectives

- feedback and test the results of the pilot builders' training workshop;
- provide a building using typhoon-resistant design, building methods and techniques which can serve as a demonstration model for local people;
- allow on-the-job training of workshop participants.

Methodology

- builders and foreman to be selected from participants of builders' training workshop;
- site management by subcontractor-appointed site supervisor;
- evaluation of building;
- analysis and synthesis of lessons learnt.

Result

- public building;
- demonstration building to which local people can aspire showing feasibility and attractiveness of typhoon-resistant building techniques.

Duration

- 2 months

Location

- Vietnam

Note: Prototype construction is to be covered by the separate budget stated in the Terms of Reference.

... PROPOSAL A ...

2.1.7 Preparation of second builders' training workshop; final proposition of action plan

Objectives

- preparation, taking account of results of pilot workshop and prototype building experience, of second builders' training workshop;
- finalisation of action plan.

Content

Action by Vietnamese counterparts and associated authorities:

- purchase of materials etc. for second workshops;
 - finalisation of list of participants;
 - administration/organisation (location etc.)
- Final field preparation by team member.

Activity in parallel

Action by Vietnamese counterparts and associated authorities:

- printing of documents etc. for implementation of action plan.

Duration

Action by Vietnamese counterparts and associated authorities:

- as necessary to meet stated deadlines.

Team member:

- 1 week.

Location

- Vietnam

... PROPOSAL A ...

2.1.8 Second builders' training workshop;
handover of manual and other education materials

Objectives

- to present final workshop programme and associated materials;
- to develop basic training skills among builders;
- to train local builders in appropriate methods and techniques of typhoon-resistant building, particularly with respect to "transition" houses and small communal buildings.

Content of workshop

- appropriate presentation of principles of typhoon-resistant building techniques with potential for local application;
- selection of prototype techniques with participants;
- small-scale building exercises;
- training in basic training skills.

Methodology for workshop

- aural/visual presentation;
- led discussion to check understanding of key problems and of potential solutions;
- joint group selection of prototype solutions using appropriate structured discussion techniques;
- on-the job training through small-scale building exercises;
- demonstration and role play training in basic training skills;
- joint end of workshop evaluation.

Activity in parallel

- presentation of finalised action plan to counterparts and associated authorities;
- presentation of public education material.

Result

- second group of builders trained in basic training skills and in appropriate building techniques of typhoon-resistant building, potentially ready for construction of next demonstration building (outside subcontract period).

Duration

- 3 weeks

Location

- Vietnam

2.2 TIMETABLE FOR PROPOSAL A

2.2.1 Timetable of activities

The following page shows the timetable of activities for Proposal A.

Unless otherwise stated these are to take place in Vietnam.

The timetable assumes a first mission date commencing 1st January 1989.

2.2.2 Critical overruns

The rains between June and September are a significant factor in planning the programme. Efficient running of practical workshops during this period would be difficult.

Delays in the start or completion of the following phases can result in the pilot workshop being postponed until after the prime rainy season, with a consequent significant prolongation of the contract period.

Critical phases are:

- 2.1.1 Preliminary field analysis;
- 2.1.2 Preparation in France;
- 2.1.3 Counterpart approvals and preparations prior to the pilot workshop.

Of these, 2.1.3 is the most critical.

Activities undertaken during the rainy season (2.1.5. Final production) have at present a greater margin. Should delays occur in phase 1, these activities will have to be undertaken on a tighter schedule than at present planned.

2.3 INPUTS FOR PROPOSAL A

The following table shows the identification and time allocation of professional inputs.

PHASE	TIME IN WEEKS	LOCATION	IDENTIFICATION	ROLE
2.1.1. PRELIMINARY FIELD ANALYSIS	3	VIETNAM	TEAM LEADER	1st MISSION
2.1.2. PREPARATION STAGE	3	FRANCE	TEAM MEMBERS SUPPORT STAFF	
2.1.3. ADMIN AND ORGANISATION STAGE	1	VIETNAM	TEAM LEADER	FINAL PREP WORKSHOPS
2.1.4 PHASE 1 BUILDERS' WORKSHOP	3	VIETNAM	TEAM MEMBER	RUN WORKSHOP
	3	VIETNAM	TEAM LEADER	COUNTERPART LIAISON ACTION PLAN
	1	VIETNAM	TEAM MEMBER	EVALUATE PROGRAMME
2.1.5. FINAL PRODUCTION STAGE	2.5	FRANCE	ALL TEAM MEMBERS	FINAL MATERIAL
	2	FRANCE	TEAM MEMBER SUPPORT STAFF SUPERVISER INPUT	EDIT AUDIO VISUAL
2.1.6. CONSTRUCTION OF PROTOTYPE BUILDING				
2.1.7. PREPARATION 2nd WORKSHOP	1	VIETNAM	TEAM MEMBER	
2.1.8 SECOND BUILDERS' WORKSHOP;	3	VIETNAM	2 TEAM MEMBERS	TRAIN WORKSHOP METHOD
	1	VIETNAM	TEAM MEMBER	FINAL PRESENTATIONS EVALUATE

TOTAL INPUT 23.5 WEEKS

SECTION 3 : PROPOSAL B

3.1 PROPOSAL B

The main stages of Proposal B are listed below.

The stages are detailed in subsequent pages of this section.

The following page shows the overall concept of Proposal B.

A summary timetable and details of inputs are given at the end of the section.

3.1.1 Preliminary field analysis

phase 1

3.1.2 Preparation stage

3.1.3 Administration/organisation stage

3.1.4 Phase 1 technicians' workshop

3.1.5 Phase 1 builders' training workshop;

3.1.6 Phase 1 policy-makers seminar;

feedback

3.1.7 Production stage

3.1.8 Construction of prototype building

phase 2

3.1.9 Preparation of phase 2 workshops;

3.1.10 Phase 2 (joint) policy-makers' and technicians' seminar

3.1.11 Phase 2 technician's workshop (continued)

3.1.12 Phase 2 builders' training workshop

SUSTAINABLE DEVELOPMENT. METHODOLOGY FOR TRAINING

proposal B

FIRST SET OF WORKSHOPS

AIMED AT POLICY MAKERS

AIMED AT MID LEVEL TECHNICIANS & DESIGNERS

AIMED AT BUILDERS

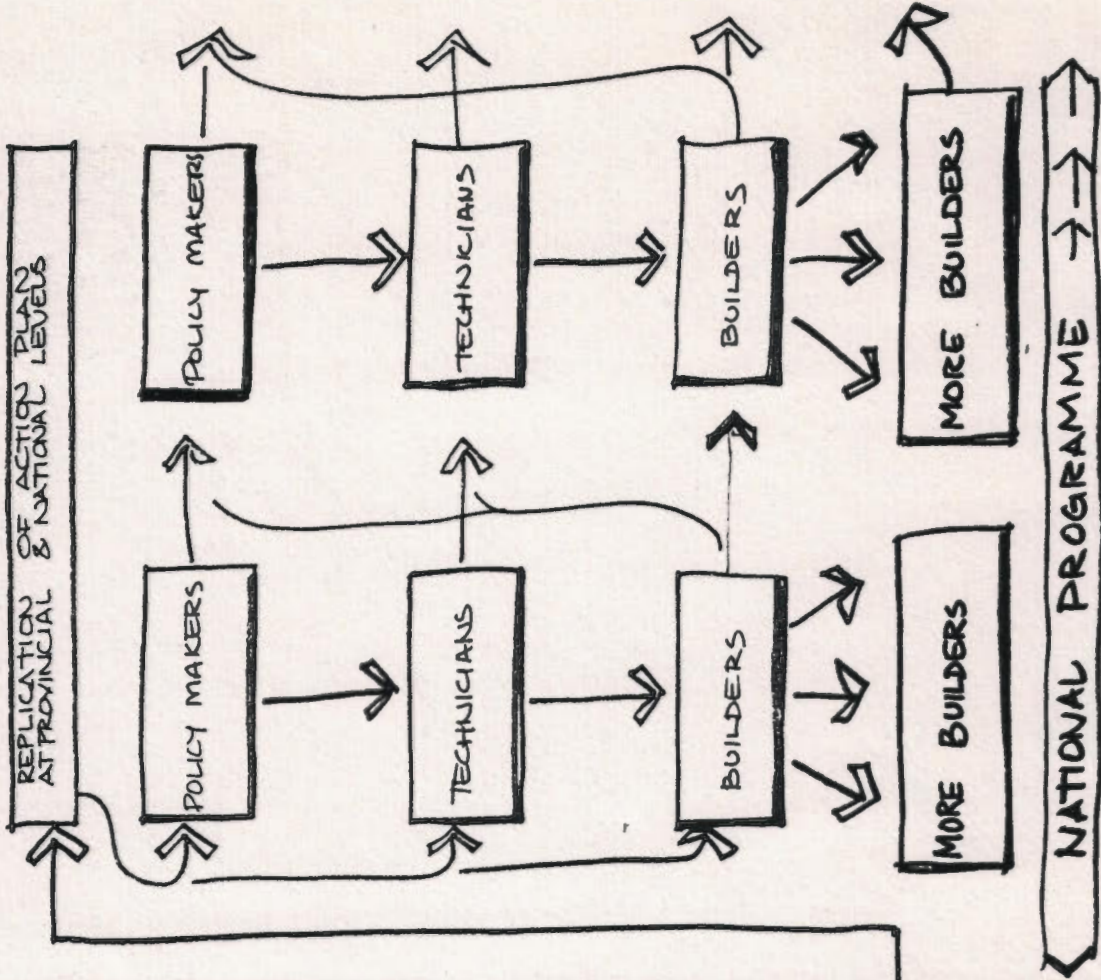
SECOND SET OF WORKSHOPS

POLICY MAKERS

TECHNICIANS

BUILDERS

FEED BACK FROM PROTOTYPE BUILDING



PHASE 1
UNDP SUPPORTED PROGRAMME

PHASE 2

... PROPOSAL B ...

3.1.1 Preliminary field analysis

Objective

- identify and analyse the key issues of the subproject environment - technical, economic, socio-cultural - which will largely determine its detailed implementation.

Content

- analysis of traditional and "transition" building construction: the materials used, the techniques, the levels of skill and know-how, the building process;
- analysis of cyclone damage (where currently visible), points of weakness and causes;
- reconnaissance of institutional set-up and target groups for workshops and seminars; numbers of participants, preliminary identification etc.;
- analysis of potential means of disseminating know-how;
- preliminary choice of scale and type of prototype building; location of workshops; location of prototype building;
- analysis of materials availability/cost/acceptability.

Methodology

- detailed liaison with counterparts, contact with other bodies concerned with the project activities; data analysis on environmental conditions;
- field analysis through observation, informal interviews, structured interviews where appropriate;
- feedback and synthesis of results with counterparts;
- outline presentation to Vietnamese counterparts and authorities of conclusions and implications for subproject implementation.

Results

- understanding of key factors in subproject development and implementation;
- agreement by Vietnamese counterparts and authorities to outline conclusions and implications;
- initiation of administration/organisation of workshop etc.
- inception report to UNCHS.

Duration

- 3 weeks

Location

- Vietnam

... PROPOSAL B ...

3.1.2 Preparation stage

Objectives

- detailed plan of action for counterpart preparation;
- production of phase 1 builders' and technicians' workshops and policy-makers' seminar materials.

Content

- design for phase 1 workshops/seminar;
- propositions for phase 1 workshop/seminar participants;
- builders' and technicians' workshops training materials and documentation;
- materials for policy-makers' seminar (to be prepared immediately following workshops);
- checklist of action required by Vietnamese counterparts or authorities with deadlines.

Result

- plans and materials for phase 1 builders' training workshop, technicians' workshop, and policy-makers' seminar.

Duration

- 4 weeks

Location

- France

... PROPOSAL B ...

3.1.3 Administration/organisation stage

Objective

- ensure that pilot builders' training workshop is run to plan.

Content

Action by Vietnamese counterparts and associated authorities:

- acceptance of phase 1 detail plan (see 3.1.2);
- purchase of materials etc. for phase 1 workshops, (particularly builders' workshop);
- finalisation of list of participants for phase 1 workshops;
- administration of phase 1 workshops (location, preparation of support equipment, furniture etc.)

Final field preparation by team member.

Duration

Action by Vietnamese counterparts and associated authorities:

- as necessary to meet stated deadlines.

Final field preparation by team member:

- 1 week.

Location

- Vietnam

... PROPOSAL B ...

3.1.4 Phase 1 Technicians' workshop

Objective

- train mid-level technicians in principles of typhoon-resistant building techniques and their impact on design concepts and quality standards;
- elicit design for prototype building;
- ensure appropriateness - technical, economic, socio-cultural - of proposed typhoon-resistant building methods and techniques.

Content

- review of principles of typhoon-resistant building techniques with potential for local application;
- definition of design concepts taking account of these principles;
- definition of practical action that can be taken;
- definition of quality and standards requirements;
- design of prototype building.

Methodology

- aural/visual presentation, with supporting pre-prepared written material as appropriate;
- joint problem identification;
- small group evaluation of potential solutions; feedback to main group; joint synthesis using appropriate structured discussion techniques;
- mutual feedback with phase 1 builders' training workshop running simultaneously (see 3.1.5);
- on-the-job training in practical application of synthesised conclusions in "live" exercise (i.e. design of prototype);
- summary of synthesised results through trainee preparation of outline dossiers, presentation panels, etc. as appropriate.

Results

- group of informed and trained technicians;
- design of prototype building;
- outline quality standards for new techniques/materials as appropriate;
- outline design concepts.

Duration

- 3 weeks (to be run simultaneously with builders' training workshop, see 3.1.5)

Location

- Vietnam

... PROPOSAL B ...

3.1.5 Phase 1 builders' training workshop

Objectives

- train local builders in appropriate methods and techniques of typhoon-resistant building, particularly with respect to "transition" houses and small communal buildings;
- test training methods appropriate to such techniques etc;
- assess reaction of local builders to new ideas presented, this being one indicator of local acceptability and replicability.

Content

- appropriate presentation of principles of typhoon-resistant building techniques with potential for local application;
- selection of prototype techniques with participants;
- small-scale building exercises.

Methodology

- aural/visual presentation;
- led discussion to check understanding of key problems and of potential solutions;
- joint group selection of prototype solutions using appropriate structured discussion techniques;
- mutual feedback with phase 1 technicians' workshop running simultaneously (see 3.1.4);
- on-the job training through small-scale building exercises;
- joint end of workshop evaluation.

Results

- group of trained builders;
- evaluation of acceptability to builders of proposed methods of typhoon-resistant building;
- selected appropriate typhoon-resistant building techniques.

Duration

- 3 weeks (to be run simultaneously with technicians' workshop, see 3.1.4)

Location

- Vietnam

... PROPOSAL B ...

3.1.6 Phase 1 policy-makers' seminar

Objectives

- create awareness amongst government institutions and departments;
- define provincial and local policy and action plan on promotion of typhoon-resistant building techniques;
- obtain relevant authorities' commitment to this policy and action plan;
- ensure an appropriate understanding of the technical issues involved amongst cadres and administrators.

Content

- review of problem;
- presentation of synthesised results of technicians' and builders' training workshops;
- joint definition of local/provincial/national strategy for promoting typhoon-resistant building methods;
- joint definition of local/provincial action plan for implementing this strategy;
- drafting of public education campaign material.

Methodology

- preliminary preparation of material (audio/visual etc.) based on synthesised results of builders' and technicians' workshops;
- aural/visual presentation;
- small group analysis; feedback to main group; joint synthesis using appropriate structured discussion techniques;
- summary of synthesised results through preparation of outline documents, publicity material, etc. as appropriate.

Results

- local/provincial policy and action plan, with commitment of key actors;
- proposition for action plan;
- outline of appropriate public information campaign.

Duration

- 3 weeks

Location

- Vietnam

... PROPOSAL B ...

3.1.7 Production stage

Objectives

- finalise action plan and phase 2 programming;
- ensure that the results of preceding stages, particularly the phase 1 workshops, are absorbed and integrated into phase 2;
- prepare and produce communication materials etc.

Content

- preparation/revision of training materials, including final version of builders' manual;
- finalisation of phase 2 workshop/seminar programme and finalisation of aids for trainers;
- development of material for public education campaign;
- production of graphic and audio visual material for policy-makers' seminar to launch public education programme and action plan;
- production of graphic and audio-visual material for use in technicians'/designers' and builders' workshops;
- completion of prototype building dossier;
- finalisation of material requirements etc. for prototype building.

Methodology

- evaluation/synthesis of earlier stages of subproject;
- revision as necessary of workshop/seminar plan and programme (see 3.1.2);
- feedback of revised proposals to Vietnamese counterparts and authorities;
- repeat revision/feedback as necessary;
- finalisation and production.

Result

- agreed and appropriate final versions of -
 - * basic audio-visual material;
 - * manual;
 - * other training/communication aids as appropriate;
 - * prototype building schedule and quantities;
 - * detailed action plan.

Duration

Action by Vietnamese counterparts and associated authorities:

- as necessary to meet stated deadlines.

Action by subcontractors:

- 8 weeks.

Location

- Vietnam (counterparts and associated authorities);
- France (subcontractors)

... PROPOSAL B ...

3.1.8 Construction of prototype building

Objectives

- apply and test results of phase 1 technicians' and builders' workshops;
- demonstrate the techniques and methods of typhoon-resistant building for local people.

Content

- construction management under guidance of subcontractor-appointed site supervisor;
- material supply to be carried out by counterparts and associated authorities;
- detail site supervision and organisation to be undertaken by participants of technician's workshop;
- building to be undertaken by participants in builders' training workshop.

Methodology

- liaison between various parties assured by subcontractor-appointed site supervisor;
- overall technical guidance and recommendations as appropriate provided by subcontractor-appointed site supervisor;
- programmed deadlines for building stages used to monitor progress;
- evaluation of building on completion;
- analysis and synthesis of lessons learnt.

Result

- public building
- "live" experience of workshop conclusions and results for both technicians and builders;
- demonstration building to which local people can aspire showing feasibility and attractiveness of typhoon-resistant building techniques.

Duration

- 8 weeks

Location

- Vietnam

Note: Prototype construction under separate budget as indicated in the Terms of Reference.

... PROPOSAL B ...

3.1.9 Preparation of phase two workshops

Objective

- ensure that phase 2 workshops, seminar and public education programme run to plan.

Content

Action by Vietnamese counterparts and associated authorities:

- purchase of materials etc. for phase 2 workshops;
- finalisation of list of participants;
- administration/organisation (location, facilities etc.);
- printing of training aids where necessary;
- printing/media organisation etc. relative to public information campaign.

Final field preparation by team member.

Duration

Action by Vietnamese counterparts and associated authorities:

- as necessary to meet set deadlines.

Final field preparation by team member.

- 1 week.

Location

- Vietnam.

... PROPOSAL B ...**3.1.10 Phase 2 (joint) policy-makers' and technicians' seminar****Objectives**

- ensure commitment of policy-makers by associating them directly in implementation of the action plan;
- launch action plan.

Content

- review of role/task allocation for implementation of action plan;
- "official" launch of action plan: public information campaign, builders' training workshop; opening of prototype building.

Methodology

- aural/visual presentation, with supporting pre-prepared written/audio-visual material as appropriate;
- synthesis using appropriate structured discussion techniques;
- application.

Results

- media launch of public information campaign;
- public opening ceremony of prototype building.

Duration

- 0.5 weeks

Location

- Vietnam

... PROPOSAL B ...

3.1.11 Phase 2 technicians' workshop (continued)

Objective

- equip technicians with method and tools for organising and running follow-on workshops and public building projects.

Content

- review of prototype building - process, ease of use of new techniques, materials etc., performance, appearance, local response etc.;
- handover of training tools, including manual and audio-visual material;
- teaching of training skills as appropriate;
- review of organisation of phase 2 builders' training workshop and allocation of tasks.

Methodology

- aural/visual presentation, with supporting pre-prepared written material as appropriate;
- joint problem identification, if appropriate;
- synthesis using appropriate structured discussion techniques, as appropriate;
- role-play etc. exercises to ensure thorough understanding of use of training materials;
- summary of results;
- real situation role allocation.

Results

- group of technicians trained in method for organising and running builders' training workshops.
- hand-over of training tools and instruction in their use.

Duration

- 1.5 weeks

Location

- Vietnam

... PROPOSAL B ...

3.1.12 Phase 2 builders' training workshop

Objectives

- apply results of phase 2 technicians' workshop;
- train local builders;
- develop basic training skills amongst builders.

Content

- appropriate presentation of principles of typhoon-resistant building techniques with potential for local application;
- selection of prototype techniques with participants;
- small-scale building exercises.
- presentation and practical exercises in use of training materials.

Methodology

The workshop to be run by participants of technicians' workshop under subcontractor guidance using -

- * aural/visual presentation;
- * led discussion to check understanding of key problems and of potential solutions;
- * demonstration of use of training materials (e.g. manual) as appropriate;
- * on-the job training through small-scale building exercises;
- * joint end of workshop evaluation.

Results

- group of trained builders;
- evaluation of technicians' tested capability.

Duration

- 3 weeks

Location

- Vietnam

Note: it would be highly desirable for the counterparts to proceed with the construction of another prototype building following the workshop, without subcontractor guidance.

3.2 TIMETABLE FOR PROPOSAL B

3.2.1 Timetable of activities

The following page shows the timetable of activities for Proposal B.

Unless otherwise stated these are to take place in Vietnam.

The timetable assumes a first mission date commencing 1st January 1989.

3.2.2 Critical overruns

The rains between June and September are a significant factor in planning the programme. Efficient running of practical workshops during this period would be difficult.

Delays in the start or completion of the following phases can result in the phase 1 workshops being postponed until after the prime rainy season, with a consequent significant prolongation of the contract period.

Critical phases are:

- 3.1.1 Preliminary field analysis;
- 3.1.2 Preparation in France
- 3.1.3 Counterpart approvals and preparations prior to the pilot workshop.

Of these, 3.1.3. is the most critical.

Activities undertaken during the rainy season (3.1.7. Final production) have at present a greater margin. Should delays occur in phase 1, these activities will have to be undertaken on a tighter schedule than at present planned.

3.3 INPUTS FOR PROPOSAL B

The following table shows the identification and time allocation of professional inputs for Proposal B.

PHASE	TIME IN WEEKS	LOCATION	IDENTIFICATION	ROLE
3.1.1. PRELIMINARY FIELD ANALYSIS	3	VIETNAM	TEAM LEADER	1st MISSION
3.1.2. PREPARATION STAGE	4	FRANCE	TEAM MEMBERS SUPPORT STAFF	
3.1.3. ADMIN AND ORGANISATION STAGE	1	VIETNAM	TEAM LEADER	FINAL PREP WORKSHOPS
3.1.4. PHASE 1 TECHNICIANS WORKSHOP	2.5	VIETNAM	TEAM LEADER	RUN WORKSHOP
3.1.5 PHASE 1 BUILDERS' WORKSHOP	3	VIETNAM	TEAM MEMBER	RUN WORKSHOP
	.5	VIETNAM	TEAM LEADER	TECHNICIAN FEEDBACK
3.1.6 PHASE 1 POLICY MAKERS SEMINAR	2	VIETNAM	2 TEAM MEMEBERS	SYNTHESISE WORKSHOPS
	2	VIETNAM	2 TEAM MEMBERS	RUN SEMINAR
	1	VIETNAM	TEAM MEMBER	EVALUATE PROGRAMME
3.1.7. FINAL PRODUCTION STAGE	6	FRANCE	ALL TEAM MEMBERS	FINAL MATERIAL
	2	FRANCE	TEAM MEMBER SUPPORT STAFF SUPERVISER INPUT	EDIT AUDIO VISUAL
3.1.8. CONSTRUCTION OF PROTOTYPE BUILDING				
3.1.9. PREPARATION 2nd WORKSHOP	1.5	VIETNAM	TEAM MEMBER	
3.1.10 PHASE 2 POLICY MAKERS SEMINAR	.5	VIETNAM	2 TEAM MEMBERS	START PHASE 2
	1	VIETNAM	1 TEAM MEMBER	LAUNCH PUBLIC EDUCATION
3.1.11 PH 2 TECHNICIANS WORKSHOP	1.5	VIETNAM	2 TEAM MEMBERS	TRAIN TRAINERS
3.1.12 SECOND BUILDERS' WORKSHOP;	5	VIETNAM	2 TEAM MEMBERS	TRAIN WORKSHOP METHOD
	1	VIETNAM	TEAM MEMBER	EVALUATE

TOTAL INPUT

37.5 WEEKS

SECTION 4 : AUDIO-VISUAL OPTIONS

4.1 OPTIONS FOR COMMUNICATION

4.1.1 The right media

The choice of the right type of media for communicating the issues, techniques and results of the sub-project are essential to its complete success.

Moreover, by making full use of the communication potential, the maximum benefit and impact can be made of activities of the sub-project.

To this end this proposal offers four types of Audio-visual option. Option 1 is included in the basic package. Options 2, 3 and 4, which are not mutually self exclusive, can be added according to the choice of proposal, and selectively increase the suitability of the media towards a particular target audience.

4.1.2 The basic communication package

The basic communication package included in both proposals A and B involves the following:

- production of the builders' manual;
- production of an 80 slide set with sound cassette;
- a prototype demonstration building;
- a poster illustrating the typhoon risk and precautionary steps.

4.1.3 The optional supplementary packages

A more varied package permits the media to be tailored to suit the specific needs of different target groups and objectives:

- media tools for training builders and use by builders;
- media aimed at the public: awareness, precautions, how to get help.
- media aimed at decision makers, and at national dissemination, inviting the undertaking of similar programmes in other provinces.

The table which follows sets out how these options can be applied to Proposal A and Proposal B.

We recommend that the transfer of slide packages to video takes place, thus using video equipment which is more likely to be available than slide/cassette equipment and facilitating the widespread replication of the programme.

For the development of a national action plan and for wider publicity for the programme, we recommend the production of the Option 4 videos, aimed at the Vietnamese public, and aimed at the planners and decision makers.

4.2 OUTLINE FOR GRAPHIC AIDS AND MEANS OF COMMUNICATION

		VISUAL	WRITTEN	INTERACTIVE	AURAL
PROPOSAL A TRAINING OF BUILDERS		80 SLIDES + CASSETTE	BUILDING MANUAL POSTER	PROTOTYPE BUILDING SMALL TRAIN- ING EXERCISES	WORKSHOP PRESENTATION
		2 X 80 SLIDES + CASSETTE	MANUAL POSTER	AS ABOVE	
		80 SLIDES + CASSETTE WITH TRANSFER ONTO VIDEO	MANUAL POSTER	AS ABOVE	
		2 X 80 SLIDES + CASSETTE WITH TRANSFER ONTO VIDEO	AS ABOVE	AS ABOVE	
PROPOSAL B COMPREHENSIVE PROGRAMME	TRAINING OF BUILDERS	4 OPTIONS AS FOR PROPOSAL A ABOVE	AS ABOVE	AS ABOVE	AS ABOVE
	TARGET GROUP PUBLIC	VIDEO FILM (OPTION 3) (OPTION 4)	POSTERS (10,000)	INVITATION TO FUTURE WORKSHOPS CUT OUT CARD MODEL	RALLIES
	TARGET GROUP POLICY-MAKERS	VIDEO FILM (OPTION 4)	ACTION PLAN POSTERS (10,000)	NONE	WORKSHOPS (2) AND SEMINARS (2)

4.3 DETAILS OF AUDIO-VISUAL OPTIONS

The Table on the following page sets out the content of all four proposed options.

Option 1 is included in the Proposals "A" and "B".

PROPOSED AUDIO-VISUAL OPTIONS

PRODUCT	MATERIALS	EDITING	DIFFUSION	REMARKS
<p>1</p> <p>20 min. 80 SLIDE PACKAGE WITH SYNCHRONISED SOUND CASSETTE</p>	<p>SLIDES RECORDS RECORDED SOUND</p>	<p>MATERIAL COLLECTED DURING WORKSHOP</p>	<p>SLIDE PROJECTOR AND LINKED CASSETTE PLAYER</p>	<p>GOOD TRAINING TOOL CAN BE UPGRADED EASY USE</p>
<p>2</p> <p>20 min 2 X 80 SLIDES IN DOUBLE MERGED PROJECTION SYNCHRONISED SOUND</p>	<p>SAME AS ABOVE</p>	<p>MATERIAL COLLECTED DURING WORKSHOP</p>	<p>TWO PROJECTORS CASSETTE PLAYER SYNCHRONISER</p>	<p>GOOD FOR TRAINING AND FOR RAISING AWARENESS NEED GOOD SYSTEM FOR PRESENTATION</p>
<p>3</p> <p>VIDEO PACKAGE BASED ON OPTIONS 1 OR 2 TRANSFER TO: VIDEO 3/4" MASTER PRODUCTS: VHS 1/2" PAL ANY VIDEO 3/4" FOR TV</p>	<p>SAME AS ABOVE</p>	<p>EDITING OF SLIDES FOR SMOOTH TRANSITION</p>	<p>ANY VIDEO SYSTEM</p>	<p>VERY FLEXIBLE FOR DISSEMINATION SLIDE SHOW TRANSFORMED TO ANY FORMAT GOOD REUSE OF BASIC MATERIAL</p>
<p>4</p> <p>VIDEO MOUNTED SLIDE AND ORIGINAL VIDEO FOOTAGE</p>	<p>SLIDES + OPTIONS = VIDEO 8mm VIDEO 1/2" VIDEO 3/4" 16mm FILM</p>	<p>TRANSFER TO 3/4" MASTER TRANSFER TO WORKING COPY</p>	<p>VHS 1/2" BETAMAX 3/4" ETC.</p>	<p>VERY GOOD FOR NATIONAL DIFFUSION GOOD FOR PROMOTING REPEAT PROGRAMME POOR FOR PRACTICAL TRAINING GOOD FOR INTERNATIONAL PUBLICITY</p>

SECTION 5 : GENERAL

5.1. OVERALL INPUT PLAN

Separate detailed input plans showing the time allocation of professional inputs have been included for Proposals A and B in sections 3.3 and 4.3 respectively. The following information supplements those detailed plans.

5.1.1 Team work

The three key professionals (one from Development Workshop and 2 from GRET) concerned in the subproject have considerable experience going back some 4 years of collaborating on projects, including similar experience to the present subproject.

Overall responsibility for the subproject will be with the team leader, John Norton. The team leader and the two other team members, Yves Cabannes and Guillaume Chantry, will, however, be individually assigned specific tasks within the subproject for which they will have immediate operational responsibility. Other tasks will be undertaken on a collaborative basis as appropriate.

The members of the team have in the past found mutual critical evaluation and support of great value.

The preliminary field analysis (see sections 2.1.1/3.1.1) will be undertaken by the team leader. Following inputs will be undertaken by two people with the exception of the two 1-week final field preparation periods for workshops (2.1.3/3.1.3 and 2.1.7/3.1.9) which will be undertaken by one person.

5.1.2 Coordination

Work not undertaken in Vietnam will be carried out in France. GRET and Development Workshop already have strong working links, and work in France will be carried out at both of their offices, with coordination assured by regular meetings. Both offices have permanent administrative support to ensure coordination during periods of one or more of the team in Vietnam. An administrative assistant at GRET will have specific responsibility for communication and distribution of documents and project-related materials. Financial and accounting support will be provided by GRET's accounting department.

5.1.3 Integration of the international and national inputs

During subcontract stages to be carried out in Vietnam, integration will be ensured by -

- the full involvement of counterparts in all stages of the subproject development and implementation,
- daily briefing meetings,
- regular (weekly or as appropriate) meetings with other directly concerned individuals and bodies,
- presentations at key stages to allow discussion and outline agreement,
- reports confirming agreed detailed action to be undertaken by each party and deadlines.

During subcontract stages where no team member is present in Vietnam, integration will be maintained in the following ways

- monitoring of agreed task and activity deadlines for action to be undertaken by the Vietnamese counterparts and authorities;
- feedback to and from Vietnamese counterparts and authorities on issues relative to the production of training and communication materials etc.

The offices of the UNDP will be used to channel communications and documents in both directions.

The above means of integration apply to both Proposals A and B. In addition, Proposal B by its very structure allows for a greater depth of Vietnamese involvement and participation in developing the content of the subproject, as well as its organisation.

5.1.4 Level and extent of Vietnamese inputs

Apart from the inputs detailed in the Terms of Reference, both proposals A and B assume the following provisions by Government and counterpart associations:

- selection of workshop/seminar participants and their engagement;
- identification of prototype type/site;
- provision of workshop facilities, including:
 - * location;
 - * furniture;
 - * materials and tools;
 - * participants meal/accommodation allowances or 'per diem' if appropriate;
- information on such areas as -
 - * building material costs;
 - * material availability, transport etc.;
 - * climate data, including typhoon history and effects;
 - * other relevant available information;

- with reference to the building prototype -
 - * site;
 - * site clearance;
 - * transport;
 - * unskilled labour;
 - * ordering/storage/delivery of materials;
- publicity, including -
 - * distribution of graphic material to public as appropriate;
 - * liaison with press/TV/radio as appropriate;
 - * launch of public information/education under guidance of subcontractor;
 - * assistance with translation into Vietnamese/local languages;
- production, including -
 - * printing of documents (including manual) in Vietnam, using or based on originals supplied, including local typesetting if necessary;
 - * selection and follow-up of printers;
 - * copying of audio-visual material over and above the quantities specified to be supplied by the subcontractor in the Terms of Reference.

5.2 MANAGEMENT PLAN

5.2.1 Relationship between member consortium

This proposal is made by a consortium formed by Development Workshop, Toronto, Canada, (through its office in France) and GRET, Paris, France.

Development Workshop and GRET are equal partners in the bid.

GRET is nominated as the negotiating group and subproject payments will be made to GRET's bank account.

All communication regarding the present proposal should be addressed to GRET-Habatat, 213 rue La Fayette, 75010 Paris, France.

5.2.2 Organisational structure for the subcontract team

The subcontract team will consist of three staff, organised as follows:

- team leader : John NORTON, of Development Workshop;
- other team members : Yves CABANNES and Guillaume CHANTRY, both of GRET.

Support services will be provided by:

- permanent administrative staff at both Development Workshop and GRET offices;
- an administrative assistant with specific responsibility for document communication and distribution based at GRET's offices;
- specialist accounting staff based at GRET's offices;
- graphics assistance through both offices.

5.2.3 Budget control

Budget control will be exercised through the comparative review, at regular intervals and at key periods, of actual versus budgeted spending under each budget heading. Budgets will be revised in the light of these comparisons and appropriate action taken if necessary to ensure that shortfalls do not occur. Specialised accounting staff will provide appropriate support from France.

5.2.4 Timing control

Task and deadline targets will be set for all stages, including detailed preparation, of the subproject, for both the inputs of the subcontractors and of other parties. Progress towards meeting these targets will be assessed as appropriate through:

- daily briefing meetings;
- regular (weekly) reviews;
- ad hoc checks at critical periods.

In the event of delays in progress threatening the meeting of target deadlines, these delays will be formally reported to the parties concerned and appropriate recommendations made. In the event of any target deadline still failing to be met, the effect on the subproject timetable will be immediately assessed and communicated to all parties, with revised recommendations for successful implementation within the agreed overall timescale wherever possible.

5.2.5 Quality control

Quality control will be ensured through:

- continuing informal mutual critical evaluation between members of the team;
- the formal evaluation of each key stage of the subproject by a team member other than the one with operational responsibility for that stage;
- informal feedback from counterparts and other parties in the course of briefings, meetings and other communication and from workshop and seminar participants;
- formal feedback in the form of required reporting as specified in the Terms of Reference.

The overall approach proposed for the subproject - which is designed to enable it to take account of each stage as future stages evolve - is also in itself a quality control measure.

5.3 CORPORATE EXPERIENCE STATEMENT - GRET

5.3.1 Background

Since 1976 GRET has placed itself at the disposal of all those who are involved in the development of agriculture, crafts, trades and microindustry in the third world. For the last decade, GRET has been working on:

- initiating technical innovation and providing support for development operations;
- processing and circulating technical and methodological information.

5.3.2 Legal and administrative structure

GRET is a nonprofit organisation (under the French law of 1901). The Board of Directors is divided into three parts: representatives of the Ministries of Cooperation and Research, of nongovernment organisations and of GRET staff.

GRET is composed of specialist research and technical support teams, including the housing and construction team which is making the present proposal jointly with Development Workshop. The housing and construction team carries out training, research and support operations in two main areas: use of local materials, and popular housing.

GRET also has a specialist communications department through which it undertakes a wide range of communication activities.

5.3.3 Prior and current work experience

(a) Technical experience

(i) training of builders

Projects in Ethiopia, Guinea Bissau and Laos have included significant components involving the training of builders. In addition, the previous experience of one of the team members includes 3 years' training builders in 4 regions of Mexico on the use of improved building techniques.

(ii) anti-cyclonic structures

GRET has run a five-year post-hurricane programme (funded by French Aid) in the Caribbean, particularly in Dominica, designing and working on hurricane-proof schools and houses. A current project in Mexico involves a low-cost housing programme for 500 wooden houses near Acapulco, a highly hurricane-prone area.

(iii) training

From the outset, training has been a major field of of GRET's activities. GRET has been involved in various types of training of potential relevance to the subproject:

- training of trainers (Laos);
- seminars for decision-makers (e.g. "Seminario da Maxcala" in Mexico, annexe);
- workshops for mid-level professionals (see Inter-Caribbean workshop, annexe);
- workshops for increasing awareness (7 years of workshops for junior professionals on "Technology and Development" in the field of housing and building);

(iv) design of training/dissemination tools

Most GRET Habitat projects, in collaboration with GRET's Exchange and Communication department, have involved the design of a wide range of training/dissemination aids and "media packages" such as:

- posters (e.g. for Guinea Bissau, francophone Africa);
- exhibitions (e.g. world-wide exhibition in 3 languages on innovation in housing; international conference exhibition on the use of bamboo as a local building material, etc.);
- audio-visual packages, video recordings, 16mm films (e.g. "NO MITIM MOM" in Guinea Bissau, "DU KENE KO" in Mali, etc.);
- building manuals (e.g. "Manuel da mejoramiento y da construccion" in Mexico);
- manuals for technicians (Ethiopia: manual for laboratory technicians; Laos: manual for technicians; Caribbean: manual on anti-cyclonic building);
- comics, games etc. for dissemination of innovative techniques.

(v) dissemination of technological innovation

GRET has specialized in this field for the past five years through its Technical Programme with Columbia and Mexico (Popular Housing Fund), the main focus of this programme being how to get new technical innovation for low-cost building accepted by those concerned.

(vi) experience in humid tropics

Although GRET has no specific experience in Vietnam, its 15 years' activities have included much research and project activity in ecosystems similar to that of the subproject. To name but a few:

- Pacific Islands: human settlement advisor;
- Brazil - northern coast: innovations in low-cost housing;
- India - Moharashtra state: "science for villages";
- Guinea-Bissau: building of health centres;
- Caribbean: school building;
- Laos: use of indigenous resources.

(b) Managerial experience

As an implementing agency, GRET has worked in some 20 countries for various institutions: local governments, multilateral or bilateral aid agencies, non-governmental institutions. The programmes managed in the course of this work have varied widely in scale. The present subproject would be regarded as average/small in the range of GRET's experience and would not appear to present any specific managerial problems.

As a general rule, projects undertaken by GRET tend to be on a longer timescale than that envisaged for the subproject. GRET's experience suggests that the impact of work undertaken grows through time with a decreasing input, both human and financial.

Another specific focus of GRET's work has been to try to work simultaneously at various levels: policy-makers (for the definition of housing policies or action plans); technicians (e.g. for the establishment of design standards and norms); and builders (to actually implement innovations in buildings).

5.4 CORPORATE EXPERIENCE - DEVELOPMENT WORKSHOP

5.4.1 Background

Development Workshop (DW) was formed in 1973 to provide technical assistance in human settlements planning, building, and research in the third world.

DW aims to strengthen local capacity to solve human settlement problems in ways that are more sensitive to real needs, affordability levels, and cultures. Three elements are integral to DW's approach: the use of indigenous resources, a close working relationship with local groups, and training of local counterparts.

DW's core staff includes architects, planners, engineers and social scientists. Associations with other professionals and institutions in complementary fields are made for specific projects.

5.4.2 Legal and administrative structure

Development Workshop is a corporation without share capital incorporated under the name "Human Settlements Development Workshop" under Part II of the Canada Corporations Act. Under the terms of its incorporation it is "to carry on its operations without pecuniary gain to its members and any profits and other accretions to the Corporation are to be used in promoting its objectives". It is governed by a Board consisting of four Co-Directors.

DW's Head Office is located in Toronto, Canada. DW also has a Europe Office in France, which is making the present proposal jointly with GRET, and two locally registered Regional Offices in Luanda, Angola, and in Niamey, Niger.

5.4.3 Prior and current work experience

(a) Technical

(i) training of builders

Development Workshop has extensive experience in the training of builders, particularly in the use of new techniques suited to local resources and skills, including the following:

- Guinea (1984/85): introducing earthquake resistant building techniques to village builders with limited local resources;
- Niger (1980, 1983, and current): "south-south" technology transfer training of local builders in shutterless vault and dome construction;
- Iran (1975/77: numerous builders training programmes, including in earthquake resistant building methods in the context of a regional rural development programme.

(ii) training of technicians and policy-makers

Projects have included:

- Sudan (1984): training of government and agency aid field staff in building for community development and in community participation and development techniques;
- Angola (1982/85): training of front-line cadres in refugee camp and settlement planning;
- Angola (1981/84): training of all local authority district school administrators in implementation of regional school planning and maintenance programme.

(iii) prototype/demonstration building

Training programmes have often been conducted "on-the-job" and evaluated through the construction of prototype buildings, typically public buildings, including:

- school teachers' housing (3 building types in each of 4 villages) showing earthquake resistant building in local materials (Guinea 1985);
- literacy centre built using "imported" vault and dome building techniques (Niger 1983);
- public facilities and housing for teachers showing in particular new earthquake resistant roofing techniques (Iran 1975/77);
- primary school built with community "self-help" in context of community development training programme (Sudan 1984);

In addition numerous public buildings (public baths, health centres, schools, community development centres, creches, workshops...) have been designed and built in a number of countries in the context of rural development or urban upgrading projects and in line with the use of public buildings for demonstration.

(iv) training aids: manuals, graphics and films

Development Workshop has produced manuals aimed at various levels of skill and literacy, including:

- illustrated step-by-step manual for simple school maintenance by teachers and parents (Senegal 1988);
- illustrated step-by-step manual for school construction by local people (Senegal 1988);
- minimum text "cartoon-strip" introducing earthquake resistant village building techniques (for NW Guinea, 1985);
- multiple option, illustrated "Manual for Constructing a Community Building" aimed at field workers with little technical building expertise (Sudan 1985);
- illustrated climate design manual (Angola 1983).

Films produced by Development Workshop include:

- "Training workshop for builders in techniques and management of low-cost construction projects" (8mm, 20 mins);
- "Community public bath construction project" (8mm, 30 mins);
- "Prototype low-cost housing" (16mm, 20 mins).

(v) disaster damage assessment and mitigation

Apart from Development Workshop's involvement in meeting immediate shelter needs (e.g. refugee camp planning), post-disaster work has focussed on long-term mobilization of indigenous resources, including in:

- damage assessment and development of assistance programme aimed at meeting local building needs using traditional materials and skills in slightly modified form (Koumbia area earthquake, Guinea 1983);
- damage assessment and design of builders training programmes to exploit indigenous resources to meet local rehabilitation needs (Bandar Abbas and Zarand earthquakes, Iran 1977);
- flood damage assessment and programme development (Awaz, Iran 1979).

(vi) design for climate

Development Workshop has led studies of traditional cooling systems and tested the climatic performance of prototype housing at the National Building Research Centre, Cairo, and well as carrying out specific climatic design analyses for various regions of Niger (1982) and Angola (1981/83), the latter being summarised in a climatic comfort design manual for local use.

(vii) national/regional policy-making

Development Workshop's experience in helping to shape national, regional or local policy in a variety of fields is extensive, and includes:

- Mali (1983): policy definition for settlement planning for displaced villagers following construction of Manantali Barrage;
- Angola (1981/85): definition, training for and assistance in the implementation of school planning etc. policy and programme for Luanda province;
- Iran (1975): key actors in formulation of comprehensive rural development policy for Selseleh region;
- Niger (1987): assistance in defining policy on community participation and assessing institutional capacity of government in area of Niamey;
- India (1986): assistance in defining state policy on slum upgrading in three cities in Kerala;
- Indonesia (1982): analysis of alternative strategies for low-income area improvement project;
- Guinea (1983): detailed recommendations to Guinea Bauxite Company on company policy on workers' housing and building materials;

(viii) additional experience in the Far East

Development Workshop has also provided assistance in 1986 and 1987 on a consultancy basis to GRET, notably for work undertaken in Laos, including climatic analysis, planning and implementation of seminars on the use of local materials, design and construction of prototype building (Naxaythong

school), and preparation of training aids including a manual on thatch. These are referred to in section 5.3.3 which outlines GRET's previous and current experience.

(b) Managerial experience

Since 1973, Development Workshop has worked in Asia, Africa and the Middle East on long-term projects as well as on short-term technical assistance and research. Development Workshop has undertaken projects for international and bilateral agencies, national governments, local authorities and NGO's. Development Workshop's capabilities range from conceptual planning to the management and implementation of the full project cycle. Development Workshop also manages funds on behalf of other agencies (i.e. CIDA funds in Angola).

The scope and scale of projects undertaken by Development Workshop varies widely: the present subproject would represent a medium to large-sized undertaking in terms of budget.

5.5 TEAM BIO-DATA

The following are the curricula vitae of the three team members -

Yves CABANNES, Coordinator, Housing and Construction Section, GRET

Guillaume CHANTRY, Engineer, Housing and Construction Section, GRET

John NORTON, Co-Director, Development Workshop

GRET

GROUPE DE RECHERCHE
ET D'ÉCHANGES TECHNOLOGIQUES

CURRICULUM VITAE

PERSONAL DETAILS

Yves CABANNES

Date of birth : 25/02/52 in Arengosse (France)

Nationality : French

PRESENT POSITION

Coordinator of Habitat/Building section, GRET (Technological Research and Exchange Group), Paris.

EDUCATIONAL BACKGROUND

1969 :

Baccalaureat

1974 :

Graduate in Economic and Physical Planning from ESSEC (College of Economic and Commercial Sciences), Cergy, France.

Civil engineering graduate from ENPC (National School for highways and bridges), Paris, France.

CES - Certificate of Higher Studies - Workshop on Urban and Regional Planning.

1975 :

EPHE - Ecole Pratique des Hautes Etudes, Paris, France. Seminar on Urban Economics. Director : Manuel Castells. Theoretical Research Group on the urbanization process in Third World Countries.

1976 :

University of Paris I Sorbonne - IEDES (Institute for Economic and Social Development Studies)

DEA (1st year of Ph. D.) in Regional Analysis and physical planning).

1977 :

IEDES - Sorbonne - Ph. D. Section : Development policy and programming - Thesis : "Determinants of the urban-rural contradiction in Irak" (Rural development and alternative technologies).

SEMINARS - ADDITIONAL STUDIES

1972 :

University Diploma in Literary Studies ("DUEL") English (2nd year of University).

1977 :

SMUH (Services des Missions a l'Urbanisme et a l'habitat) - Agency for overseas missions in town planning and habitat - A practical course in urban development problems in countries.

1978 :

ECLA - Economic Commission for Latin America and SAHOP Ministry of Human Settlements and Public Works - Mexico. Seminar on "Ecotechniques for Human Settlements in the Humid Tropics".

LANGUAGES

French, English, Spanish, Portuguese : Fluent
German : Basic knowledge.

PROFESSIONAL EXPERIENCE

Nov. 1974/June 1975 :

ENPC - National School for bridges and highways.
Urban and Regional Planning Workshop.
. In charge of documentation/audio-visual dept. and assistant-lecturer.

June 1975/Dec. 1976 :

ATEA SETAP - Society for Physical and Economic Planning Technical Studies.
. Economic Planning and coordination team. Studies in the setting up of four urban units. (12,000 dwellings in Irak).

1977 :

CFECTI - GRET - Technological Research and Exchange Group. Paris. Permanent Cooperation as Co-leader of the "Habitat Building Panel" - Training, Research and Development in the appropriate technology field.

1978 :

ACTIM - Technical and Industrial Cooperation Agency, & CONACYT, National Scientific and Technological Center - Mexico. French Cooperation Expert.

. Steel Complex - Lazaro Cardenas - Mexico.

In charge of the design for the evaluation study of complex regional impact.

June 1978/June 1980 :

CEESTEM : Center for Economic and Social Studies of the Third World.

Area for Appropriate Technology.

In charge of the project : "Alternative building materials and technologies for rural constructions".

June 1980 to date:

Coordinator of Habitat/Building section of GRET, which has implemented a wide range of activities over the last 10 years in the fields of training, information, research, project implementation, with particlaur reference to two main areas: low-cost housing, and building materials production and the use of indigenous resources. GRET's secondary areas of expertise include:

. regional development of public areas;

. identification/organisation/monitoring and evaluation of low-cost housing or industrialisation of local materials programmes;

. negociation/management and monitoring of research and survey contracts.

ACADEMIC AND TEACHING EXPERIENCE

1974/1975 :

Assistant-lecturer at the ENPC.

1976 :

ENPC - Collaboration in the preparation of a lecture on "Urban Design and Composition".

1977/1978 :

Lectures and conferences in various French universities on : Town/Country contradictions in the Third World (ENPC) Physical Regional Planning in rural areas of the Third-World (IEP) ; Regional Planning in Third World Countries (SMUH) ; Rural Based or country based development (SMUH).

1977/1979 :

Organization of Summer Workshop on "Traditions and Innovations in Human Settlements" of the Technology and Development Course.

Provence University and CFECTI-GRET.

1980 to date:

In parallel with present position as Coordinator of GRET Habitat/Building section, visiting lecturer mainly at French universities and colleges (University of Paris I; University of Paris VIII; Ecole Centrale; ENPC; School of Architecture, UPI, Paris; IIAD; etc...) and international ones (IHS, Rotterdam; Tokyo University; Colegio de Mexico; Venice University, etc...).

CABINET DE MÉDECINE GÉNÉRALE

TÉL. 45-83-25-25

DOCTEUR HENRI BITTAR

LAURÉAT DE LA FACULTÉ DE MÉDECINE DE PARIS

SCP 75 1 70058 4

CONSULTATIONS

APRÈS-MIDI : LUNDI, MARDI, JEUDI, VENDREDI
DE 15 H A 19 H 30

MATIN : MERCREDI DE 8 H A 9 H
ET DE 10 H 30 A 14 H

SAMEDI EN ALTERNANCE DE 10 H 30 A 13 H

DOCTEUR MARIE-CHRISTINE MEYNARD

SCP 75 1 70057 6

CONSULTATIONS

MATIN : LUNDI, MARDI, JEUDI, VENDREDI
DE 8 H A 9 H ET DE 10 H 30 A 14 H

APRÈS-MIDI : MERCREDI DE
15 H A 19 H 30

SAMEDI EN ALTERNANCE DE 10 H 30 A 13 H

DOCTEUR M.-C. MEYNARD

*Je remercie cette doct
Examiné par Monsieur CABANNES
Yves. Il n'y a pas de cancer
ni psychiquement de lésions de
viscères contiguës. TP et
en bonne santé.*

*30240
CABANNES
RUE
7013*

*Fait à Paris le 26 7 88
EM*

GRET

GROUPE DE RECHERCHE
ET D'ÉCHANGES TECHNOLOGIQUES

CURRICULUM VITAE

PERSONAL DETAILS

Guillaume CHANTRY

Date of birth: 25/6/51 in 1951 à Arras (France)

Married

Nationality: French

QUALIFICATIONS

Civil engineering graduate of ENPC (National School for Highways and Bridges) 1974)

PRESENT POSITION

Engineer with Habitat/Building section of GRET
(Technological Research and Exchange Group), Paris.

PROFESSIONAL EXPERIENCE

1976-78 :

Urban specialist in the Department of Urbanism and Architecture, Dakar.

- . Study of master plan for a regional capital (Louga).
- . Analysis of slum rehabilitation projets (Pikine).
- . Monitoring of urban studies and urban development projects.

1978-81 :

Architectural assistant with the Papatheodorou architectural practice, Paris.

- . Organisation of social housing opération.
- . Analysis of tenders.
- . Programming and monitoring of site work.

1981 to present :

Engineer with Building and Habitat section of GRET, Paris.

. Organisation, coordination and control of aid projects in the field of low-cost housing in developing countries (Ethiopia, India, Dominica, Guinea-Bissau, Mexico, Brazil, Laos).

. Specialist missions in the field of the industrialisation of local materials (Burundi, Dominica, Egypt, Mozambique).

. Studies and research projects (translated titles: International aid in the human settlements sector, An evaluation of habitat policy in socialist Third World countries, Computer programmes used for urban management, An evaluation of technical innovation dissemination tools).

. Evaluation of projects by international organisations and NGO's.

. Missions undertaken in : Egypt, Burundi, Madagascar, Mozambique, Senegal, Mali, Cameroun, Dominica, Laos, Korea.

Development Workshop

PRINCIPAL PROJECTS

- . Rural development in the Aurès
ENPC/ECOTEC 1974
- . Master plan for Louga
D.U.A. Dakar 1977.
- . World Bank policy in the field of Third World housing
GRET 1981.
- . Lime : Production and utilisation in housing
published by the Min. of Cooperation 1981.
- . Housing in Algeria
CFECTI 1981.
- . Seminar on low-cost housing in Yaounde
CEBTP/UNESCO 1981.
- . Lime production development in Burundi
ASECO/World Bank 1982.
- . Construction of health centre in Guinea-Bissau
SWISSAID 1984.
- . Support for building materials production
cooperatives (Mozambique)
CIMADE 1984.
- . NGO Profiles Project
HIC 1984.
- . Opening of Newtown school followed by housing
projects (Dominica)
Min. of Cooperation and Development 1984.
- . Feasibility study of lime production in Dominica
Min. of Cooperation and Development 1985.
- . Seminar on local materials in Vientiane (Laos) :
Organisation and running
Min. of Cooperation and Development 1985.

AREAS OF COMPETENCE

Specialist in matters relating to the problems of human settlements in less developed countries, with 16 years applied experience.

Principal role in programme preparation, organization and implementation; project management of inter-disciplinary teams.

Training in community development and construction, in popular participation, and for managerial and technical skills; production of training materials and manuals.

Design and construction of low cost housing and community facilities. Environmental design and climatology.

Use of local resources in developing countries, development of construction materials production industries. Research into indigenous planning and building methods.

Educational facilities: set up of rehabilitation and maintenance programmes, educational planning & monitoring; school design and construction.

Pre- and post-disaster planning, and training needs assessment, programme development and implementation. Seismic resistant design.

Planning and designing for urban and rural community development, including urban renewal and rehabilitation, site and service development, slum and squatter settlement upgrading, and rural settlement development.

Computer programme design and application to the above.

PROFESSIONAL EXPERIENCE

RESEARCH

1987/88 * Cooperation Française/GRET - Worldwide.

Research on thatching. See Publications.

1986 * IDRC: INTERNATIONAL

Research and proposals for the development of the IDRC 'Shelter Research Support Programme. Identification of priority areas for shelter research and financial support.

1983 * USAID : MALI

Policy for materials choice and settlement planning - Manantali Barrage Resettlement Programme.

1978/79 * Institute for Rural & Peasant Studies, Tehran : IRAN

Evaluation of indigenous building industry & resources in Caspian Region, with detailed proposals for upgrading.

1973/74 * OMAN Government : OMAN

National study and analysis of Oman's indigenous building systems and their potential. Detailed proposals for urban and rural development. Book on same due 1987.

1973 * Architectural Association : EGYPT

Research on housing and traditional planning in Cairo.

1973 ongoing, * Development Workshop & others : IRAN, EGYPT, NIGER

& worldwide. Research into techniques of vault and dome roofing construction; use of bamboo & palms.

TRAINING

1986-88 * Coopération Française/ GRET : LAOS

Ongoing programme developing the production and use of local building materials in Laos for the government. Co-preparation and implementation of lectures and practical work on the use of local materials, for professors at the Ecole des Techniciens Supérieurs du Bâtiment, Vientiane. Preparation of detailed teaching materials and reference documents. In depth evaluation of Laos' building resources, industry and costs; practical work with bamboo, timber, cementitious materials, preservation of organic materials. Design and construction of school at Naxaythong, Vientiane area in liaison with Laos' Ministry of Education. Working language: French.

1985 * USAID/OFDA : GUINEA

Builders' training, introducing earthquake resistant building techniques within context of local resources and socio economic situation. Language: French.

1984 * EuroAction Acord : SUDAN, Juba.

Community development and participation: training government and aid field staff in appropriate techniques for participatory community and infrastructure development.

1983 * USAID : NIGER

Projet Habitat Economique: training for vault & dome construction; building materials production; project management and problem solving. Language: French.

1975/77 * CEDS/SIDP : IRAN

Builders' training programmes, in Yazd & for Selseleh Integrated Development Project. Language: Persian.

CONSTRUCTION : HOUSING

1985 * USAID : GUINEA, Koumbia.

Improved earthquake resistant housing for school teachers, in both local and durable materials.

1983 * USAID : NIGER, Niamey.

Housing using stabilised and mud blocks, vault & dome roofing. Technical demonstration units.

1975/77 * SIDP : IRAN, Luristan.

Improved earthquake resistant housing using local materials, and vault and dome roofs. Housing for teachers, using timber roofs, improved wall construction and servicing.

1973 * Architectural Association : EGYPT, Gournah.

Mud brick vault and dome roofed house, part of training programme with Nubian masons.

EDUCATIONAL FACILITIES PLANNING & MONITORING

1987/1988 * WORLD BANK/SENEGAL MINISTRY OF EDUCATION/SCAAN -
SENEGAL

Field research and detailed planning for pilot rehabilitation programme (100 classes); evaluation and detailed implementation programme for nation school maintenance with community help; development and programming of computerised systems for above; consultant on design of school prototypes for 400 new classes. Chief consultant/ part time project leader/ responsible for whole maintenance package.

1981 & ongoing. * ANGOLAN Government & others : ANGOLA, Luanda.

Organization, training and implementation of school planning/ maintenance and rehabilitation programme for Luanda and province. Inventory of school stock and programming for repair and rational use of space.

1983 * AFRICAN DEVELOPMENT BANK / UNESCO : SAO TOME & PRINCIPE
Planning for secondary school building programme.

1980 * AFRICAN DEVELOPMENT BANK / UNESCO : COMORO ISLANDS
Detail planning for primary school and vocational workshop building and rehabilitation programme. Design of National Education Institute.

1980 * UNESCO

Co-author of 'Basic concepts of educational facilities planning' with El Jack and Almeida.

CONSTRUCTION : COMMUNITY FACILITIES

1984 * Dept. of COMMUNITY DEVELOPMENT : SUDAN, Juba.

Primary school with local materials and community 'self-help'.

1975/77 * SIDP : IRAN, Luristan.

Public baths; vault and dome roofing, local materials, solar energy & biogas; community participation.

Health centres, schools, community development centres, all with local materials.

INTEGRATED RURAL DEVELOPMENT

1975/77 * SIDP : IRAN, Luristan.

Multi-disciplinary rural development planning; design and implementation of various public facility and housing projects; water supply and energy programmes; stimulation of employment and materials production.

URBAN PLANNING & SQUATTER SETTLEMENT UPGRADING

- 1987 * UNCHS : TUNISIA
Formulation of terms of reference for UNDP assistance to the Tunisian "Dégourbification" programme. Programme for the aided self-help reconstruction of 92,000 dwellings. UNDP/UNCHS assistance requested particularly with refernce to technical control of the programme.
- 1987 * UNCHS/ Urbaplan: TUNISIA, Tunis.
Reformulation of urban housing self-help construction project, including assessment of technical and operational problems, integration of socio-economic aspects and preparation of self-help building phase.
- 1987 * DANIDA/UNCHS : NIGER, Niamey.
Identification of possibilities for community participation and training needs for low-income housing project in Yantala area of Niamey, and assessment of institutional capacity of Government.
- 1982 & ongoing. * ANGOLAN Government : ANGOLA, Luanda.
Planning, site and service & squatter upgrading in Luanda; camp and settlement planning at Matala and Wacocongo for refugees and dsiplaced people.
- 1976/77 * SIDP : IRAN, Luristan.
Design and implementation of town plan for Alashtar, regional centre for Selseleh.
- 1973 * Architectural Association : EGYPT, Cairo.
Evaluation of existing planning in Old Cairo.

EARTHQUAKE DAMAGE ASSESSMENT AND MITIGATION

- 1984 * USAID : GUINEA, Koumbia.
Koumbia earthquake (1983) damage assessment; development of assistance programme aimed at long term building needs.
- 1977/78 * CEDS : IRAN, Bandar Abbas & Zarand.
Earthquake damage evaluation and development of builders' training programmes for mobilizing indigenous resources for local rehabilitation.

CONSTRUCTION MATERIALS PRODUCTION AND DEVELOPMENT

- 1984/85 * Compagnie des Bauxites de Guinée : GUINEA, Kamsar.
Review of C.B.G. workers' housing and building materials policy; detailed proposals for use of local materials and for developing block, tile and pozzolana production.
- 1983 * USAID : NIGER
Comparative development of different block and brick types for Ministry of Public Works: use of stabilizers; peanut shells; cements; compression and hand moulding, and syrian kiln.
- 1982 ongoing. * ANGOLAN Government : ANGOLA, Luanda.
D.W. Ram: design and production of manual block and tile making press for national use. Machine also manufactured under licence in Zimbabwe.
- 1975/78 * SIDP & IRPS : IRAN, Luristan and Caspian.
Setting up woodworking units, lime kilns and brick kilns.

PROJECT DEVELOPMENT

1985/86 * Development Workshop : NIGER
Development, organization and fund-raising for 'Projet Niger Habitat, Agadez Department', a large scale shelter and infrastructure programme - in part linked to desertification - in the urban and rural contexts of Agadez.

CLIMATIC ANALYSIS AND DESIGN

1981/83 * ANGOLAN Government : ANGOLA
Climatic comfort design manual for all regions, illustrated.

1982 * ISAID : NIGER
Climatic design analysis for Filingué, Niamey and Tahoua areas.

1973 * Hassan Fathy & others : EGYPT, Cairo.
Study of traditional cooling systems in Cairo & Gournah; testing climatic performance of prototype houses at National Building Research Centre, Cairo.

TEACHING AND ACADEMIC EXPERIENCE

1986-88
Visiting lecturer at the universities of Edinburgh, Newcastle, Salford, and Grenoble and the Polytechnics of Manchester and Birmingham. See also training in Laos.

1984
Visiting lecturer at Sussex University, Oxford Polytechnic.

1980
1-month graduate workshop 'Indigenous building in the Third World' for Aga Khan Programme for Islamic Studies, MIT & Harvard.

1979/80
Head of Third World Studies Unit, Architectural Association, London.

1974/75
Course organizer 'Indigenous Building and the Third World', A.A, London.

MANUALS & GRAPHICS

1988 * WORLD BANK (in collaboration with SCAAN Consultants)
"Guide d'Entretien", author and illustrator; primary school maintenance manual aimed mainly at teachers. French text.
"Guide de Construction", author and illustrator; primary school construction manual aimed mainly at non-technical builders. French text.

1987 * GRET
'Les toitures végétales', author and illustrator. Being published in 1988. French text with many illustrations.

- 1986 * ITDG
 'Building with Earth - A Handbook', author and
 illustrator. published by ITDG Publications, UK, August
 1986.
- 1985 * USAID : GUINEA
 'Manuel de construction parasismique en Guinée' in
 cartoon strip format for earthquake resistant design and
 building in local and 'durable' materials; text in
 French.
- 1985 * EuroAction Acord : SOUTHERN SUDAN. (Publ:Development
 Workshop)
 'Manual for constructing a community building', a
 multiple option and step-by-step illustrated guide; text
 in English.
- 1983 * ANGOLAN Government : ANGOLA
 'Como construir criando conforto climatico em Angola';
 illustrated climate design manual with portuguese text.

DEVELOPMENT WORKSHOP FILMS AND EXHIBITIONS

- 'Training workshop for builders in techniques and management
 of low-cost construction projects', Iran, 1977. Film
 (8mm, 20 mins.)
- 'Community public bath construction project', Iran, 1975. Film
 (8mm, 30 mins.)
- 'Prototype low-cost housing using mud-brick and vaults and
 domes', Egypt, 1973. Film (16mm, 20 mins.)
- 'Development Workshop Projects', Biennale di Venezia, 1982.
- 'Building in Development', Tehran Museum of Contemporary Art,
 1979.
- 'Indigenous Building and the Third World', UN Habitat
 Conference, Vancouver, 1976, and touring USA.
- 'Egypt: Indigenous urban and rural planning', Architectural
 Association, London, 1973.

MEMBERSHIPS AND AFFILIATIONS

Memberships include: CIB; The Development Association; The
 Architectural Association; Building Materials Panel of ITDG;
 Panel for risk reduction in hazard prone areas, U.K.
 Interational editor of Open House International.

CABINET MÉDICAL

Docteur E. HEIB Docteur M. HEIB Docteur J. PETIT

Lotissement « Le Terrain » - 47500 MONTAYRAL - Tél. : (53) 71-20-58

Docteur James PETIT

Médecine Générale

47 1 01111 4

Consultations :

Mardi - Vendredi 14 h à 17 h

Lundi 16 h à 19 h

Mercredi 14 h à 19 h

Jeudi 9 h à 12 h et sur R.-V.

Samedi en alternance

Montayral, 5 août 1988.

Je, Poussignat, Docteur en Médecine, certifie que
Monsieur NORTON John est en bonne santé apparente.

DOCTEUR JAMES PETIT

01 - GÉNÉRALISTE

~~Lot Le Terrain - 47500 MONTAYRAL~~

47500 MONTAYRAL

CONVENTIONNÉ

47 1 01111 4 | 01 | 11 | 20 | 11

Pour les visites à domicile, prévenir avant 9 h le matin et 17 h l'après-midi.