



Project number: VIE 99/001

Developing Popular capacity Preventing typhoon damage to housing in Central Vietnam

Development Workshop
& Alternatives



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July 2000 – December 2000

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Agence canadienne de
développement international

Canadian International
Development Agency

Canada

 Alternatives

1. Interim Summary – January 2001

a) The context and the project

Each year the Central Provinces of Vietnam are hit by storms, typhoons and flooding. Over 70% of the population is concentrated in the coastal zones, which raises the risk from typhoon and water disasters. In the region, families build for themselves. Frequent damage from flooding and typhoons means that family investment in building is invariably lost because insecure structure and fixing exposes the house to extensive damage.

This should not be the case. Taking preventive action to strengthen one's house greatly reduces the extent of damage, and does so at much lower cost than the cost of repair or rebuilding. Incorporating good building techniques and cyclone resistant details at the time of building. Is even cheaper.

Regrettably, encouraging preventive strengthening of domestic buildings has not historically been addressed as a priority in storm damage prevention strategies in Vietnam.

To address this situation, CIDA-IHA has funded an Alternatives and Development Workshop three-year project begun in 1999 to mobilise the population in Central Vietnam to take preventive action in strengthening their own homes against storm damage.

The project uses a combined programme of practical demonstration on village houses and village animation activities to bring about a change in attitudes so that damage prevention in housing becomes a higher priority.

b) Summary of activities

- *In addition to the 3 Pilot communes worked on since January 2000, seven additional communes have been selected and work on identifying beneficiaries has been started, as well as initial training for builders and some animation activities.*
- *Work on strengthening houses to demonstrate typhoon resistant techniques have been completed on 35 houses in three pilot communes, and are under way on 14 more houses in 8 communes. A total of 204 houses are scheduled for strengthening in ten communes by the end of 2001, and is progressing as planned, reflecting the expansion of activities in this period.*
- *Work on the rehabilitation of Vinh Hai market and on restoring the refuge harbour at Phu Da has been completed, both demonstrating ways of reducing vulnerability to land or water based homes.*
- *The project core team has been established and trained by DW, and individuals are now responsible for the co-ordination of their own commune; at the same time the overall team provides skills and support to commune work as required and requested.*
- *Studies have been carried out on the level of vulnerability of a large sample houses and on the work that is required to make them storm resistant. The results show that over 80% of families live in houses which are vulnerable, and that for the majority, strengthening adds 15 to 45% in cost, and some as little as 5%*
- *There is a solid base of practical information and examples about how to make existing houses safer and less vulnerable, and the project is working to make this information available to largest number of people.*

- *The project has established "Commune Project Committees" on Storm Damage Prevention in each commune, who contribute to the mobilisation and animation activities in their commune, and the selection of beneficiaries. The role of local advisors for 'Cyclone Resistant Building' is being encouraged.*
- *Animation activities continue to take place in all pilot communes, in schools and with the public. Methods have included developing local theatre, the distribution of posters, manuals, raincoats and hand held fans, and the involvement of press and TV. The same activities will take place in the extension communes.*
- *Three public seminar/workshops have been held in Hué, to review work done and to develop with our local counterparts, the programmes and strategies that are to be adopted in their communes.*

c) Impact of demonstrations and current limitations

An end of year internal project evaluation of project activities has shown that:

- *the local authorities regard genuine typhoon damage prevention as a priority, in most of the communes*
- *the inhabitants are aware of the project's activities in the communes involved*
- *the inhabitants played the part expected of them in the work carried out on their homes*
- *the inhabitants are interested in the methods used.*

However, the strengthening houses (where this is viable) with the active and financial participation of the beneficiary families raises at least three related concerns:

- *the capacity of families to mobilise funds is limited, and most have to (and do) turn to borrowing; access to credit remains an issue, albeit that families are prepared to borrow when they are convinced of the need.*
- *there is a huge number of families whose homes need strengthening, and this reinforces the need for care in selecting the relatively few families who will benefit from a Project subsidy in having their houses strengthened.*
- *Some specific small 'strengthening' components could be produced and marketed in the province, which could facilitate reinforcing roof structures.*

d) Future actions

In the three "pilot" communes, the objective is to reach all the villages and hamlets. In the 7 extension communes, an average of 12 houses are being selected in each commune, aiming at optimising the demonstration value within the scope of available resources. In addition, the project intends to carry out strengthening on a few 'high visibility' public buildings (schools or markets).

Before and into the typhoon season (mainly January to August), the Project and commune partners, working as Cyclone Building Advisors, will give additional families from the communes "tailor-made" advice on their homes (without subsidising any practical action).

e) Future prospects

By the end of 2001, the project team will have acquired an experience that is quite unique:

- *A well developed capability for assessing the vulnerability and for carrying out the improving and strengthening of housing that is required with family participation*
- *A considerable capacity for the mobilisation of local resources and families.*
- *An efficient method of approach and of intervention with the local authorities and the community (Communes, Districts)*

This experience should ideally be spread throughout the province by decentralising the project within each district.

2. Project parameters

a) Project Area

The project targets populations are in the Central Provinces of Vietnam, and primarily those in the province of Thua Thien Hué, Central Vietnam.

b) Target communes and beneficiaries

The project works at present with 90 000 inhabitants in 10 communes. In the second half of 2000, the Project has extended its activities from three to ten communes,

District	Commune	Population
Phong Dien	Phong Binh	7 437
Huong Thuy	Thuy Thanh	7 845
Huong Tra	Huong g Chu	8 866
Phu Vang	Vinh Xuân	8 450
Ville de Hué	Thuy Xuân	9 596
Quang Dien	Quang Tho	7 836
Phu Loc	Vinh Giang	5 186
	Total population in extension communes	63 682
	Pilot Communes	
Phu Loc	Vinh Hai	2 700
Phu Vang	Phu da	10 137
Ville de Hué	Huong So	14 322
	Total population	27 159
	Total population in communes	90 841

c) Duration

The project duration is from March 1999 until the end of February 2002. Overall activities in 2000 are on schedule according to the work plan updated in January 2000, and continue to be so in early 2001.

3. Methodology

The project encourages people to strengthen their houses: the accent is on practical demonstration and communication with the population.

Assessment: in each commune, vulnerability, building styles and resources, and needs are assessed, and a programme developed with commune partners.

Practical active demonstration: The project collaborates with families in the practical strengthening of their own houses, which directly demonstrates how preventive action can realistically be applied to existing buildings.

Animation: In each village animation/awareness raising activities take place to convey the message to all the community on the need for preventive action. These include public theatre, workshops with schools, public radio, posters and more. The intention is to stimulate short term and long-term awareness of the need to take preventive action. Animation activities take place at provincial level as well, using public media.

Popular mobilisation: Collaboration with the local authorities enables the project to bring together large groups of people for training and demonstration activities that benefit the community as a whole, such as restoring and strengthening the local market.

Public review: At the end of each stage in the project, a workshop or seminar brings together representatives from the villages, the communes, the districts and the

provincial authorities, and specialist services. They review the work that has been done and express their opinions about the way the project should proceed.

Participation: The project works directly with the inhabitants in the communes, with all levels of local authority in the province, and specialist services such as the Provincial Committee for Storm Prevention.

Expansion: from pilot communes to cover communes in all the coastal districts.

4. Summary of project activities against Log Frame

Overall objectives	Interim results January 2001	Modifications/Comments <i>January 2001</i>
Mobilise the vulnerable population of the Central region of Vietnam (Quang Nam & Quang Tri Provinces, and Da Nang City) to effectively take efficient preventive measures to strengthen their homes at risk from typhoons, with the following aims:	Main target province changed to Thua Thien Hué and neighbouring provinces Project start up completed.	Overall target zone remains the same; provincial focus shifted (<i>as previously reported</i>). Mobilisation work underway in all coastal districts.
1. Modify the attitude and the practices of the people, of skilled workers, of technicians, and of decision makers so that prevention becomes a priority in construction	<i>Extensive documentation developed in Vietnamese to communicate with local authorities. Widespread work in communes. Demonstration work on house strengthening and on public facilities; Animation at commune and provincial level. Active involvement of commune leaders</i>	Demonstration and animation taking place in 10 communes, three seminars held so far in Hué. Poster, radio and TV exposure. All contribute to changing attitude about the need for prevention. <i>See Annex 1 – Activities year 2000 – for further details of work</i>
2. Ensure that housing is strengthened	9 Houses strengthened in pilot programme. Extension activities started in July 2000 will lead to a total of over 200 houses strengthened, + advice given to many more families	

Immediate objectives	Interim results January 2001	Modifications/Comments <i>January 2001</i>
1. At local level (District, Communes, Population) To mobilise the population to take preventive action which is economically, technically and socially realistic, through awareness-raising activities, demonstration on individual housing, community and family participation, in differing contexts (coastal area fishing villagers, and a peri-urban population): • to reconstruct damaged housing, using more typhoon resistant techniques • to consolidate existing "transition" housing (which uses both traditional and modern materials) • in include the basic principles of cyclone-resistant building in new housing	Village level surveys started or complete, and community identification started or complete (status varies from one commune to another); work on numerous houses either under way or complete for strengthening; several new buildings constructed in pilot communes to show how these same techniques apply at all levels. Communes include fishing and farming communities, rural and peri urban communities and settlement close to or far from the sea. Awareness raising activities taking place in all communes. See summary in Annexe 1 and full report.	
2. At Province level To assist the Disaster Prevention Committees to develop ways of helping the most affected section of the population (the poor), through technical and communication training	Agreement secured with Thua Thien Hué Provincial People's Committee Partnerships established, and project objectives understood and appreciated	<i>Selection by Province and District level People's Committees of pilot communes completed and creation of Commune typhoon damage prevention committees (ref. O.1 and O.2 of Annex 1). Mobilisation and preparatory seminar held March 2000 (ref. TR.1 of Annex 1), Review of Phase 2 seminar held June 2000 for Province, District & Commune participants (ref. TR.2 of Annex 1)</i>
3. At national level To develop and strengthen the inclusion within strategies of the need (and the possibilities) for prevention amongst the sections of the population most affected by typhoons	Planned for Phase 3 in the project Third workshop in November sees greater level of province participation, and more TV and press coverage.	

						Dossier de base sur les cyclones (V) Études sur l'habitat (V) Report Compte-rendu du Séminaire (F) Dossier des interventions (F)
A.1	Hué TV Information	March	Information on the Seminar (1') on Hué Television (shown 4 times)		Thua Thien Hué Province	
A.2	Video Film / Seminar	March	Documentary on the way in which the Seminar was conducted	1 400 000 Dgs		
H.3	Study on strengthening housing / Trial houses	March - April	Detailed study on trial work to strengthen housing in the 3 communes (3+3+2)			Habitat et renforcement anticyclonique / Étude : Travaux pilotes d'amélioration de l'habitat / Avril 2000, 42 p. (V, F)
O.2	Creation of Commune Typhoon Damage Prevention Committees	March	Organisation, and official setting up by the Commune People's Committee (6 to 12 members)		3 Communes	Organisation du Comité (V, F) Décisions de Comités Populaires (V, F)
T.3	Recruitment of Local Team / Phase 2 - Animators	April	Reinforcement of animation team 3 assistant animators			
T.4	Weekly meeting of the Project Team	April →	Coordination, planning of activities			Compte rendu hebdomadaire (F)
H.4. a	House strengthening trials Huong So	April - May	Pilot work in 3 houses / Village of Trieu Son Tay	7 560 000 Dgs 6 710 000 Dgs 3 430 000 Dgs	3 families (participation) 1 370 000 Dgs 4 480 000 Dgs -	Habitat et renforcement anticyclonique / Bilan Travaux pilotes d'amélioration de l'habitat / Juillet 2000, (V, F)
H.4. b	House strengthening trials Phu Da	April - June	Pilot work in 2 houses / Village of Thon Dinh Cu	13 360 000 Dgs 3 800 000 Dgs	2 families (participation) 7 250 000 Dgs 1 900 000 Dgs	Cf. H.4.a
H.4. c	House strengthening trials Vinh Hai	April - June	Pilot work in 2 houses / Villages of Thon 4, Thon 2	6 940 000 Dgs 7 250 000 Dgs	2 families (participation) 12 700 000 Dgs -	Cf. H.4.a
H.5. a	Project House / Phu Da	April - June	Reconstruction of a house (45 m ²), using typhoon-resistant principles, future base for the Project and the Commune Typhoon Damage Prevention Committee	12 860 000 Dgs	1 family 4 960 000 Dgs	Cf. H.4.a
H.5. b	Project house / Vinh Hai	April - June	Design and construction of a house (40 m ²), using typhoon-resistant principles, future base for the Project and the Commune Typhoon Damage Prevention Committee	24 650 000 Dgs	Vinh Hai Commune	Project détaillé (V)
A.3	Panels (10)	April - May	Installation of 10 roadside panels (1,20x1,20m) with typhoon damage prevention slogan	2 950 000 Dgs	3 Communes	
A.4	Poster (1000)	April - May	Poster showing 10 principles	1 800 000 Dgs		Poster

			Size A1 / Public places			
A.5	Manual (1000)	April - May	Simplified typhoon-resistant building manual (in cartoon-strip form), 20p.	4 600 000 Dgs		Building manual
A.6	Fan (1000)	April - May	Manufacture of 1000 fans, with image and slogan	1 200 000 Dgs		Fan
A.7. a	School Animation / Training	April - May	Training sessions for teachers (1/2 day) / Prevention - typhoon hazards	3 940 000 Dgs	130 teachers in the 3 communes	Dossier Formation / Écoles
A.7. b	Drawing competition	April - May	Drawing competition for primary school children on the theme: "Typhoon"	1 200 000 Dgs	550 children (primary schools of the 3 communes)	Winning drawings
A.7. c	Parade	April - June	Children's "Parade", with flags and banners, of mobilisation on damage prevention	3 250 000 Dgs	800 children	
A.8	Performance / Theatre	April - June	Writing theatre play scenario Organisation of complete performances (songs and theatre), to mobilise the inhabitants	2 800 000 Dgs 3 970 000 Dgs 4 410 000 Dgs 3 680 000 Dgs	Communes (spectators) Phu Da / 2 (2 000) Vinh Hai (1 500) Huong So (500)	
A.9	Video Film / Activities	April - May	Film on the various commune activities			1 hour film on animation/awareness-raising activities in the communes
H.6. a	Feasibility Study : Vinh Hai Market	May - June	Study on the reconstruction of the Public Market (partly destroyed in the November 1999 floods)			Etude de faisabilité Marché de Vinh Hai, Juin 2000, 3p. + plans (V, F)
H.7. a	Feasibility Study: Phu Da Canal	May - June	Study on improving the canal of the Sampan-dwellers Village (partly filled in during the November 1999 flooding)			Etude de faisabilité Canal de Phu Da, Juin 2000, 3p. + plans (V, F)
TR. 2	Seminar Evaluation Phase 2 Progress of activities	21 - 23 June	Review of phase 2 of the project, and preparation of the extension phase of activities	23 300 000 Dgs	Participants Province, District (8) Communes (27)	Panels on: Housing and typhoon-resistant strengthening / Examples of pilot work Animation Activities Children's drawings Preparatory documents Programme du Séminaire (V, F) Rapports d'activités (Général, Animation, Technique) / Juin 2000, 18p. (V, F) Hué Television documentary (8')
H.6. b	Technical Study: Vinh Hai Market	June - July	Architectural and Technical Study of the Market; organisation of work			Dossier de présentation Marché de Vinh Hai (V) Dossier de Plans (V)
H.7. b	Technical Study: Phu Da Canal	June - July	Topographical survey and plans for embankments and masonry banks	2 000 000 Dgs		Dossier Technique (V)
T.5	Local team recruitment	July	Animation team: 1 (female) animator			
H.6. c	DWF - Vinh Hai Protocol	July	Protocol between DWF and the Vinh Hai People's Committee for the reconstruction of the Market, and the training programme			Accord DWF-CP (V, F)
H.7.	DWF - Phu Da	July	Protocol between DWF			Accord DWF-CP (V,

c	Protocol		and the Phu Da People's Committee for dredging the Canal, and the animation programme			F)
O.3	Housing Improvement Programme Selection of beneficiary families Pilot communes	July - September	Organisation of the broad process for selecting families for assistance with housing improvements (proposal by People's Committee, discussions in the villages, rapid studies by the Project, and selection of priority candidates)		Pilot communes	Méthode (organigramme) (V, F) Listes provisoires de familles (V) Enquêtes su chaque famille (renforcement de l'habitat, capacité de participation de la famille) (V)
A.10	Animation programme Phu Da Canal	July	Animation programme, theatre, loud speakers, competition during the dredging of the canal	1 870 000 Dgs	300 people taking part in canal works	
TR. 3	Technical training programme Vinh Hai Market	July - September	Training programme for building workers and village leaders : 1 day	1 670 000 Dgs 2 200 000 Dgs 2 390 000 Dgs	Vinh Hai (35) Huong So (45) Phu Da (53)	
H.7. d	Phu Da Canal Works	10 July to 31 July	Work carried out by the sampan-dwellers community and inhabitants of the Commune Dredging: 6 500 m ³ Bank protection	Project participation 74 650 000 Dgs	Participation - Commune: 10 300 000 Dgs Community: 54 750 000 Dgs	Report on the Phu Da Canal works 2p (V,F)
H.6. d	Vinh Hai Market works	15 July - 15 November	Construction of the Market: Renovation of the old market hall / 76 m ² New 2-storey building, the upper floor of which can be used for storing goods and as a refuge for the villagers when typhoons and/or flooding occur / 111 m ² Total surface area: 188 m ²	Project participation 97 000 000 Dgs	Participation by the commune and the market traders 20 000 000 Dgs	Report on the construction of the Market, 5p (V F)
H.8	Strengthening homes Pilot communes	July - December	Extension of the programme based on the priorities (cf. O.3) Maximum project participation per home 5 000 000 Dgs Financial participation by the family		Phu Da / 11 Vinh Hai / 10 Huong So / 6	Habitat et renforcement anticyclonique / Récapitulatif des travaux réalisés, Dec 2000, 6p. (F)
A.11	Caps (200)	September	Manufacture of caps, with project logo and slogan	1 500 000 Dgs		
A.12	Demonstration	September	Children's demonstration, with flags and banners, mobilisation on prevention	2 735 000 Dgs	900 children (Pilot communes)	
A.13	Rain capes	October	Manufacture of rain capes, with project logo and slogan	2 175 000 Dgs		
A.14	Loudspeaker broadcasting	October	Broadcasting (20 minutes / broadcast / week / commune) on typhoon-resistant know-how		Pilot communes	
O.4	Contacts and discussions with the Districts on the selection of Extension communes	November	Selection : Thuy Xuan / V. Hué Thuy Thanh / D. Huong Thuy Huong Chu / D. Huong Tra Quang Tho / D. Quang Dien Vinh Giang / D. Phu Loc Phong Binh / D. Phong Dien Vinh Xuan / D. Phu Vang			
A.15	Preliminary survey	November			Extension	Reports on the

	of the situation in the project Extension communes				communes	Communes (V, F)
TR. 4	Seminar 3 Phase Evaluation Extension activities of	3 17-18 November	Review of phase 3 of the project and preparation of the extension phase in the 7 new communes	15 500 000 Dgs	Participants Province, District (18) Communes (26)	Panels Housing and typhoon-resistant strengthening / Example of pilot works The organisation of the Project Animation activities Work on the Vinh Hai Market Works on the Phu Da Canal Preparatory documents Seminar Programme (V, F) Rapport on Extension communes (V) Project activity report June - October 2000, (V) Simplified Basic building manual, 40 p. (V) Video General project activities (35') Typhoon-resistant building techniques (Ministry of Construction) Documentary Hué Television (5') Interview in TT Hué newspaper (13/12)
T.6	Organisation of local team	November	Reorganisation of the team for work in 10 communes (one person in charge of activities for each commune)			Project team organisation (V, F)
O.5	Commune Liaison Committees for the Typhoon damage prevention Project	20/11-5/12	Organisation and official setting up by the People's Committee of the Commune		7 Extension communes	The decisions of the People's Committees (V, F)
O.6	Meetings with the Committees Communal	December	Planning of activities (animation, selection of beneficiaries)		7 Extension communes	
T.7	Organisation of activities	December	Introduction of provisional budget for each commune for 2001 (animation, training, housing) Method for monitoring of activities		10 Communes	Activities monitoring sheet (V, F) Budget monitoring by Commune (V, F)
TR. 5	Technical training programme	December	Training programme for construction workers, village and family leaders : 1 day	2 100 000 Dgs 2 200 000 Dgs 2 200 000 Dgs	Quang Tho Thuy Thanh Huong Chu	
H.9	Strengthening of housing	December	Preliminary studies Selection of beneficiaries		7 Extension communes	

6. Staffing, programming and risks

a) Staffing and commune support

Each commune now has a DW commune activities co-ordinator. Each co-ordinator draws on the specific experience and skills of other team members as required to meet the needs of the programme in his or her commune. The pilot communes get more substantial technical support given the larger number of buildings needing supervision.

b) Work-plan

The timetable presented in the January 2000 progress report has been respected in 2000. The table outlines current programming against the outline work plan:

Phases	Initial outline timetable	Revised timetable (as at January 2000), unchanged	Notes on progress
Phase 1 Installation	Months 1-3:	Months 1 – 8 Project installation	Logistic & admin. in-country delays
Phase 2. Part 1 Setting up and training of project area teams, equipment, and animation project.	Months 4-9:	Months 9 – 12 Survey in pilot communes	Complete First assessment workshop held March 2000.
Phase 2. Part 2 Testing in 3 communes and evaluation of methods used. Feedback to and from both operational teams. Interim evaluation	Months 10-12:	Months 12 – 15 Demonstration and animation in Pilot communes.	Complete Second assessment workshop held end June 2000
Phase 3 Activities undertaken by Canadian agencies and the project team to share experience with neighbouring districts and provinces. Programme active in several communes.	Months 20-32: Dissemination to end of year	Months 16 – 32 Regional dissemination of project results planned end 2001	Extension Communes identification completed by November 2000 and confirmed in Third assessment workshop; Work in 7 new communes started; work continued in pilot communes

c) Risks

The major risk is from natural disasters (flooding, typhoons), which can slow down work in the villages. For the project, the impact is usually short term, and not considered significant.

d) Management and partnerships

- Development Workshop is registered by PACCOM (People's Aid Co-ordinating Committee) to operate in Central Vietnam.
- A convention has been signed between the Provincial People's Committee of Thua Thien Hué Province and Development Workshop, and the People's Committee is the official body accepting the project in Vietnam.
- The People's Committee of Thua Thien Hué Province has designated the Thua Thien Hué Consulting and Designing Construction Company as the principle partner working with Development Workshop.
- The Project, managed by Development Workshop, hires its own staff, including some members of the Consulting and Design Company, and other staff identified externally by DW. The project is managed by an expatriate co-ordinator.
- The Committee for Flood and Storm Control is a formal partner, and designates a person to participate in project workshops and project review meetings.

7. Financial reporting

Statement of Income and Expenditures according to original budget categories

Review of project spending

Expenditures in 2000 have been in line with projections established at the end of Phase 1 for the Phase 2 and 3 periods. Projected expenditure increased sharply at the start of Phase 3 extension activities in July 2000 as planned with a greater amount of construction work, and this will continue to increase from the beginning of 2001.

Comment on adequacy of original budget estimate.

Within the overall budget envelope, in 1999 DW increased the proportion of funds going directly to Vietnam compared to those allocated to technical assistance, and this situation has not changed.

The project counterparts have been clear in expressing the desire to see the project's approach demonstrated in as many districts as possible and DW has responded to this request. However, with the extension of activities into a total of ten communes in 5 districts, the amount that can be done in terms of demonstration and strengthening in each commune is in practice quite limited: both more time and resources are in reality needed in order for the project to have a greater impact in the extension communes

DW reviewed the budget in autumn 2000, and made a small adjustment in favour of more village activities, compensated by slightly lower than projected local team costs.

Comment on local fund-raising:

Local participation is increasing as practical activities develop in the communes, and the levels of financial commitment by the commune People's Committees and individual families is positive. Family contributions since July 2000 have doubled the expenditure contributed by the project on house strengthening, and this is likely to continue.

VIE99-01 Prevention of typhoon damage to shelter,
 Central Vietnam
 Budget monitoring in US \$
 Year 2000
 Month To end December
 2000

Budget Post	Item / Designation	TOTAL				
		Budget \$US	Budget adjusted, autumn 2000, taking account of expenditure	Expenditure to date \$ US	Current Balance \$ US	%
1.	Equipment	13 300	13 300	9 586	3 724	72,0%
2.	Local Team	73 466	68 916	33 307	35 609	48,3%
3.	Activities	104 400	108 950	33 988	74 962	31,2%
4.	Technical Assistance	102 480	102 480	57 881	44 599	56,5%
Sub Total		293 646	293 646	134 752	158 894	45,9%
	Management	29 365	29 365	15 475	15 889	45,9%
Total		323 011	323 011	148 227	174 784	45,9%

Annexe 1. An overview of issues on reducing vulnerability in housing in central Vietnam

a) Demonstration central to encouraging the reduction of vulnerability

Key to the Project's activities is the practical demonstration of how housing can be improved using locally available, and financially accessible, materials and techniques to make one's house more storm resistant. This demonstration, on private houses spread through ten communes, is in turn one element of the Project's overall 'animation' activities. Taken together, these aim to change the way in which local people, builders and decision-makers view housing issues and aim to develop active recognition that preventive strengthening reduces vulnerability to storm damage.

b) The choice between strengthening existing structures or rebuilding for new?

Most national and international disaster rehabilitation and prevention projects in Vietnam addressing flooding or typhoons aim to build "strong" new houses, often on the widely adopted 'core house' principle favoured as an approach in many flood, storm and earthquake prone areas of the world. The result can save many lives and belongings. But there are some common limitations to the approach:

- It is frequently difficult for the population to replicate the model of the core house or extend it with the same degree of safety – both cost and access to non local materials are common blockages to replication; the more materials are 'non-local' the greater this difficulty can become.
- Funding for large-scale construction support is difficult to mobilise except in the aftermath of disasters. Yet private building takes place all the time, much of which is perforce quite or very vulnerable, and it is this that needs support. Addressing the issue of vulnerability means in part addressing the ongoing process of how people build for themselves.
- Core and prototype house programmes have a tendency to propose a limited range of models, which do not necessarily respond to individual family and local contextual needs.

The last issue is pertinent in the central Vietnam context. DW's evaluation at shelter in Thua Thien Hué shows that although most houses are built on the same model (i.e. divided into 3 bays with the ancestral altar in the central bay, and an additional veranda), not only does the design of the veranda, of the roof structure, of the gable ends, etc. differ from one commune to another, but also each house has its own distinctive appearance, corresponding to the family living in it and the "vision" it has of its home and how this will evolve.

In the vast majority of village houses, the furniture is restricted to a single "valuable" item: the ancestral altar piece made of carved hardwood, taking pride of place in the middle of the house. Other pieces of furniture – beds, tables – are nearly always extremely simple and poor quality (bamboo, 4th grade wooden battens, etc.) And last but by no means least, the notion of "aesthetics" remains important and applies both to the façade, but above all to the roof and mainly interior roof structure, and is referred to in every workshop that DW has held in the province.

This overall implies that reducing vulnerability calls for an approach to strengthening that can be applied efficiently to a very wide variety of houses and families, and to the resources they can access.

c) Promoting the strengthening of existing houses

According to the evaluations carried out in the communes covered by the project - and acknowledging that results vary depending on how "wealthy" the commune is - overall, housing can be classified into three categories:

- A) "vulnerable" housing: lack of any real structure, composite materials (cost: 50-100,000 Dôngs/m²)
- B) "semi-solid" housing: cement block walls (with or without reinforced concrete posts), wooden roof structure made of wood or wood and bamboo, tiled or corrugated iron roof, not very strong doors and windows (cost: 200 – 300,000 Dôngs/m²)
- C) "solid" housing: a proper reinforced concrete structure (posts and ring-beam) wooden roof structure, tiled roof, wooden doors and windows (cost > 400,000 Dôngs/m²)

For type A, the issue of overall typhoon-resistance does not arise: the house itself is not structured to stand up to major external forces, and is often neither air tight nor waterproof.

There are only two possible solutions:

- total costly reconstruction, where possible using recovered materials (mainly the roof structure and covering) (cost: 10-15 million to build an improved type B house;
- taking fairly inefficient precautions before the arrival of a typhoon (sand bags or stones on the roof, and ties to hold the roof down).

For type C, belonging to "wealthy" families, only a few details need to be improved and the family can do this, if guided to do so.

For type B, which represent the vast majority of village houses, although with wide variations, making improvements represents a fair chance of avoiding destruction by the usual typhoons: strengthening the way the walls, the roof structure and the roof are held together and making sure that the woodwork is strong.

d) Evolution in the project strategies

At the outset of the project, the Project partners – the Communes - wished to focus on the poorest families, owning type "A" houses, and in particular the "social" cases (such as elderly women or young, single parent women). The first demonstrations were therefore frequently total reconstruction, with the project providing most of the funding (8-15 million).

This phase enabled the Project team to acquire a better understanding of the building process, to identify typhoon-resistant building techniques using local materials, and to put these into practice, but represented a considerable amount of work on a limited number of families, and where others in similar circumstances would find it hard to replicate what had been done.

By June 2000, the Project and its Commune partners recognised that continuing along this path, other than resolving a few individual housing problems – as opposed to tackling typhoon-resistance as such – was taking it too far from the Project's broader objectives.

The focus has therefore been re-aligned to address, as far as improvements were concerned, the types of housing in Category B, which are structured but which have weaknesses (value 10-15 million dôngs) and to make sure that families contribute