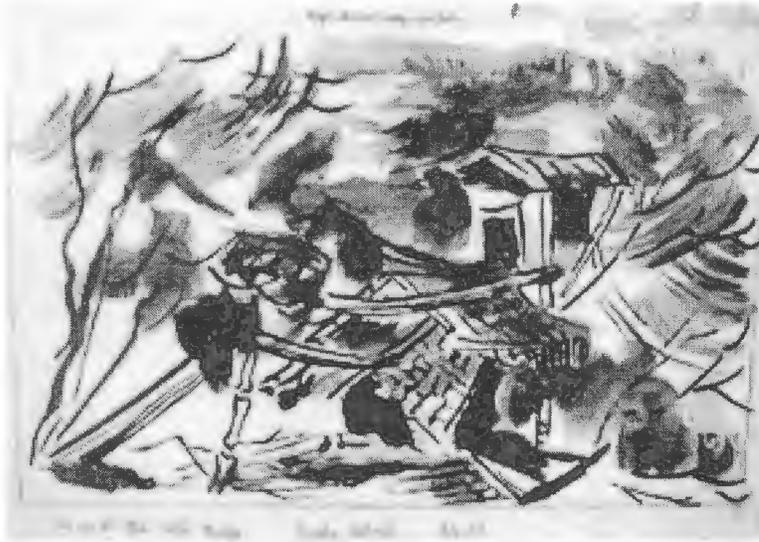




Project number: VIE 99/001

Developing Popular capacity Preventing typhoon damage to housing in Central Vietnam



Development Workshop
& Alternatives

Six monthly
report
January – June
2000

From village school children to city decision makers



Report prepared by
Development Workshop

July 2000



Agence canadienne de
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Canada

Alternatives

Project number: VIE 99/001

Project Title: Assisting the development of popular capacity to prevent typhoon damage to housing in Central Vietnam

Organisation: Development Workshop & Alternatives

Country: Vietnam



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Cover : Prize winning painting by Vinh Hai school child on the theme of typhoon damage
 Participants looking at display panels at the second seminar in Hué City, June 2000

Executive Summary

Each year the Central Provinces of Vietnam are hit by storms, typhoons and flooding. Vietnam is considered one of the most disaster prone countries in the world. Over 70% of the population is concentrated in the coastal zones which raises the risk from typhoon and water disasters.

In this region, families build for themselves, using the means available. 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.

But extensive damage to housing can be reduced at a cost much lower than the costs of repairs: the DW field studies in 2000 show that the strengthening costs to all but the weakest houses adds between 15 and 45% to the initial cost. This would be lower if the same measures were taken at the time of building.

These issues have not been addressed in the majority of prevailing strategies and programmes on storm damage prevention.

To address these issues, CIDA-IHA funds an Alternatives and Development Workshop three-year project begun in 1999 to mobilise the population of provinces in Central Vietnam to take preventive action in strengthening their own homes against storm damage.

The project uses a programme of village animation and demonstration to change attitudes so that damage prevention in housing becomes a higher priority.

The innovative emphasis on prevention underscores the challenge of promoting the acceptability of house strengthening as a means of reducing vulnerability.

Summary of activities:

The work undertaken during the period from January to June 2000 divides into two main periods. Each period was finalised by a seminar held in Hué to review and propose actions in the project, bringing together all the levels of project participation from family up to provincial leaders.

Between January and March, the project core team has been established and trained by DW.

Three Pilot communes have been selected: Vinh Hai (Phu Loc District), Huong So (Hué City) and Phu Da (Phu Vang District).

Preliminary studies have been carried out on the level of vulnerability of sample houses and 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.

After the 1st Seminar in March 2000, work has proceeded with the strengthening of 8 houses, each one demonstrating quite different requirements and solutions, and the building of one demonstration house in Vinh Hai.

As a result of a Seminar recommendation, the project has established "Commune Project Committees" on Storm Damage Prevention, who contribute to the mobilisation and animation activities in their commune, and the selection of beneficiaries.

Animation activities have taken place in all three communes, in schools and with the public. Methods have included developing local theatre, the distribution of posters and manuals and hand held fans, and the involvement of press and TV.

After the second review seminar in June, work is now proceeding on expanding activities in the pilot communes and the start of extension into neighbouring communes.

Project number: VIE 99/001

Project Title: Assisting the development of popular capacity to prevent typhoon damage to housing in Central Vietnam

Organisations: Alternatives + Development Workshop

Country: Vietnam

1. Introduction

The International Humanitarian Assistance Programme of the Canadian International Development Agency has provided funds to Alternatives and Development Workshop for a three-year project to provide assistance for the development of popular capacity to prevent typhoon damage to housing in central Vietnam.

This funding period began in April 1999. The targeted beneficiaries are the population of coastal settlements in central Vietnam where cyclones cause major damage to housing and infrastructure annually.

The focus of the project is on mobilising the population of provinces in Vietnam to take preventive action in strengthening their own homes against storm damage. Families in Vietnam build for themselves, using to varying degrees local skilled labour according to the means available.

The project's core approach of preventive house strengthening to reduce vulnerability is innovative and is based on promoting ten key points of typhoon resistant planning and building through a programme of village animation and demonstration to change attitudes. Damage prevention in housing has to become a higher priority, whether people are building new houses or repairing or strengthening existing ones.

The approach can be, and needs to be, applied to almost all types of houses. It is particularly important for the increasing number of houses where families purchase materials (e.g. corrugated cement roof sheets, tiles, bricks) but invariably use very weak or insecure methods for the support and fixing of materials. Thus their investment becomes extremely vulnerable to the next storm.

2. Context

Each year the Central Provinces of Vietnam are hit by storms, typhoons and flooding. Vietnam is considered one of the most disaster prone countries in the world, and typhoons are an annual event. In 1999, Thua Thien Hué, where the project is based, experienced the worst floods in living memory. Vietnam's topographical features (low-lying river deltas and lagoons, coastal lands prone to flooding and mountainous areas to flash flooding) mean that over 70% of the population is concentrated in the coastal zones and is at risk from annually recurring typhoon and water disasters.

Damage to houses is only one of many devastating effects of flooding and typhoons, but in domestic terms it can be considered to come close after loss of life and injury. Damage to the home means that apart from buildings and belongings being lost, the family's previous investment in building or improving their home – buying roof tiles or wooden doors and windows, for example - has in most cases also gone. Therefore, with

reduced resources, the house they rebuild is frequently weaker than the one they had before. Under the circumstances, progress in improving the standard of living is very difficult. Particularly deplorable is that the high levels of damage to the majority of houses can be reduced for significantly lower costs compared to the cost of rebuilding. Damage in smaller storms need not in fact occur.

a) Project Area



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

Thua Thien Hué province is located in the northern part of Central Vietnam. It borders Quang Tri province in the north, and Da Nang and Quang Nam provinces to the south. The province has a narrow coastal plain with large lagoons, and is backed by mountains. The mountain range that separates Thua Thien Hué from provinces to the south also cuts it off from a warmer southern climate; rain is frequent all year, and winters are wet and cold, making living and working conditions hard.

The coastal lagoons stretch over 70 kilometres, and two of the three coastal districts (Phu Loc and Phu Vang districts) house over a quarter of the province's 1 million population. Because much of the province's economic activity relates to the lagoon and the sea, people live in zones that are at high risk from storm damage.

b) Target beneficiaries

In 2000, the Project is specifically targeting the poor in the districts of Phu Loc and Phu Vang, and the Municipality of the City of Hué. This will extend to other districts in 2001. The direct project beneficiaries are the poorer and most vulnerable

members of the community who are assisted in having their houses strengthened. Secondary beneficiaries are (i) local builders, and village and community representatives who receive training, and (ii) school children, their families and their teachers, who participate in training and animation activities on the subject of reducing vulnerability in shelter.

c) Duration

The project duration is from March 1999 until the end of February 2002. The duration of the project has not changed. Activities in 2000 are on schedule according to the work plan updated in January 2000.

d) Methodology

The project accent is on exchange, communication and demonstration with the population.

Animation: In each village animation/awareness raising activity, such as public theatre, and workshops with schools, the aim 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.

Practical 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.

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 out from pilot communes: Following the Phase 1 Project Installation period (1999), in Phase 2 (December 1999 to June 2000), the project is working - to start with - in three pilot communes, and will expand in Phase 3 (July 2000 to end 2001) into neighbouring communes, districts and neighbouring provinces.



3. Summary of project activities against Log Frame

| Overall objectives | Interim results January 2000 | Modifications/Comments July 2000 |
|--|---|---|
| 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. |
| 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 | Project documentation developed in Vietnamese to communicate with local authorities. Neighbourhood surveys started, and field support teams engaged. | Demonstration and animation taking place in 3 pilot communes, and seminars being held in Hué. All contribute to changing attitude about the need for prevention <i>See Annex 1 – Activities year 2000 – for further details of preliminary surveys (ref. H.1) and studies (ref. H. 2); recruitment of Local Team (Phase 2) animators (ref T.3), and weekly project team meetings (ref. T.4)</i> |
| 2. Ensure that housing is strengthened | | 9 Houses strengthened in pilot programme. Extension activities starting in July 2000 <i>Housing Improvement Programme – Selection of beneficiary families July-August 2000 (see ref. O.3 of Annex 1, Extension of programme based on priorities (see ref. H.8 of Annex 1)</i> |
| Immediate objectives | | |
| 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) • to include the basic principles of cyclone-resistant building in new housing | Village level surveys started and community identification started | <i>See "At Provincial level" below for selection of pilot communes etc.</i> <i>Awareness-raising activities successfully completed and/or in place (ref. A.1 to A.9 of Annex 1)</i> <i>Detailed study on trial house strengthening work (ref. H.3 of Annex 1)</i> <i>House-strengthening trials completed (ref. H.4 a, b, & c of Annex 1)</i> <i>Completion of project "demonstration" houses (ref. H.5.a and b of Annex 1,</i> |
| 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).</i> <i>Mobilisation and preparatory seminar held March 2000 (ref. TR.1 of Annex 1)</i> <i>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 | |

| Overall objectives | Interim results January 2000 | Modifications/Comments <i>July 2000</i> |
|---|--|--|
| 4. Feasibility studies of specific projects Loans to strengthen housing Protection programmes (e.g. safe harbours...) | Projects identified allowing a greater impact on present project: Risk mapping following recent major floods; Support to families for roof strengthening following flood and typhoon damage in late 1999 | <i>Specific projects: Reconstruction of public market, dredging and bank reinforcement of canal, see refs. H.6. a,b, c and H.7 a,b, c of Annex 1 for completed feasibility studies, technical studies, and commune protocole agreements respectively Also A.10 for July canal "animation" programme and TR.3 for market training programme (July to Sept.) Practical works due to be completed – by early August 2000 for canal (see ref. H.7.d) and by end Sept 2000 for market (see ref. H.6.d).</i> |

| <u>Activities</u> | <u>Progress – July 2000</u> |
|--|--|
| ❖ Organisation, training and management of a local co-ordination team and of 2 mobile teams to undertake activities in the villages | <input type="checkbox"/> Recruitment and training of technical and animation staff, allocated to individual communes as appropriate, with shared core staff at Hue co-ordination office, completed. Weekly meetings ensure on-going training and development. |
| ❖ Vulnerability studies of existing typical housing and its adaptation to the principles of typhoon-resistant construction, with help from the families | <input type="checkbox"/> Studies completed in Vinh Hai, Phu Da and Huong So communes (Phu Loc, Phu Vang districts, and Hué City respectively) |
| ❖ Writing plots and theatre plays reflecting local contexts, with the participation of the communities ❖ Awareness-raising activities (surveys, theatre, video) in each Commune and village of the pilot District | <input type="checkbox"/> Live performance scenarios completed and performed in 3 above communes. Other awareness-raising activities include: TV information programme; video films; publicity panels; posters; manual; fan, school teacher training; school drawing competition; and public parade |
| ❖ Practical demonstration of how to strengthen housing in each village, providing technical advice and possibly strengthening materials ❖ Structured training of the staff and cadres involved | <input type="checkbox"/> Pilot strengthening work trials in 7 houses (4 villages) completed May 2000 <input type="checkbox"/> "Demonstration" project houses (future commune "damage prevention committee" bases) completed June 2000 <input type="checkbox"/> Ongoing training |
| ❖ Dissemination of the methods used and results obtained (regular newsletter, lectures, television broadcasts) | <input type="checkbox"/> Hué TV information programme; video films; publicity panels; posters; manual; fan, schoolteacher training; school drawing competition; and public parade. |
| ❖ Office established / Equipment purchase | <input type="checkbox"/> Hué Project Office established, equipped and staffed by February 2000, and animation team further strengthened April 2000. 2 Commune project bases completed June 2000. |

4. Outputs

The table in Annexe 1 summarises the project outputs up to July 2000 with details on documentation that has been prepared in Vietnamese and in French, and specifics on budget allocations to detailed tasks within the programme.

After a slow start in 1999, progress in 2000 has been very satisfactory, and the commitment of the project team and that of local authority counterparts has been very good.

Phase 1: Installation of the project

Activities in 1999 concerned the institutional establishment of the project, which was completed in December 1999. Apart from the formalities of establishing the project, this period focussed on developing a clear understanding on the part of local Vietnamese authorities and partners about the project objectives and strategies, and on gaining their commitment to these. Engaging the active support at provincial, commune and district level within the People's Committees is important to the success of the programme, and was a necessary precursor to starting practical activities in the communes.

Phase 2: Activities in the pilot communes

The activities in the period between December 1999 and June 2000 have been divided into two main periods, each one ending with a public seminar in Hué that reviewed the work that has been done and outlined the way forward.

The first period in Phase 2 included:

- Phase 2.1: Staffing and choice of pilot communes
- Phase 2.2: Preliminary studies in the pilot communes.
- Phase 2.3. Local assessment of the project activities: the 1st Workshop

Phase 2.1: Staffing and choice of pilot communes

As of December 1999 a locally staffed project team has been built up by DW, and is now divided into three groups, respectively dealing with (a) Technical issues related to strengthening shelter, (b) Animation and socio-economic issues, and (c) Management and interpretation.

Within the team, individuals have specific responsibilities, such as the organisation of entertainment performances held in the villages, the conduct of feasibility studies on issues such as credit for house strengthening and the development of specific sub-projects in target communes, and structural and architectural design and the supervision of house strengthening activities. In addition, a member of both the technical and the animation team is allocated to each commune.

Technical team members have been recruited from the Thua Thien Hué Consulting and Designing Construction Company, the latter largely responsible for building design in the province, and the project is thus able to strengthen the long term capacity for safe building design in the province.

Training of the team by DW has been reinforced by the involvement of the Technical team leader, Mr Vien, in previous DW typhoon damage prevention activities in Vietnam.

As part of the training in January 2000 the project undertook a small pilot study in the neighbourhoods of An Cuu and Phu Hiep in Hué on five houses built with different

materials and structural systems. The study prepared the team for the subsequent survey work in the pilot communes, and assessed the basic building costs, the need for typhoon resistant strengthening and its comparative cost as a percentage of the total cost. Examples ranged from:

- fragile wood/bamboo and tin roofing costing 3,4 \$US /m² to build, and needing over 50% in extra cost to make the structure safe,
- to
- much more solid structure with a concrete frame, masonry walls and a tiled roof, at a m² cost of 43 \$US, but needing only 5% extra spending to make the house typhoon resistant.

During phase 2.1, the project has also proceeded with the choice of three pilot communes with the help of Provincial and District People's Committees:

- The Commune of Huong So, on the outskirts of Hué City, with 14 322 inhabitants and 2970 families; this is an agricultural and semi urban commune.
- The Commune of Phu Da, in Phu Vang district, with 10 137 inhabitants and 1934 families. This is a fishing and farming commune located quite close to Hué, on the inland side of the coastal lagoon.
- The Commune of Vinh Hai, in Phu Loc district, with 2 700 inhabitants and 640 families, located between the ocean and the coastal lagoon on what has now become an island after the 1999 floods. This is essentially a fishing community.

Phase 2.2: Preliminary studies in the pilot communes

From early January onwards, studies have been undertaken in the three pilot communes of three different types of house in each commune. The studies included a detailed evaluation of the context of each commune, its general vulnerability, and an analysis of the overall profile of shelter in the commune. The studies looked at the socio-economic situation of sample families, and considered the effects of the 1999 floods and the capacity for families to recover after a disaster.



These general studies in the communes importantly confirmed that the vast majority of people live in houses that are classified by the project as 'Half-solid', houses that have neither the strength of the traditional timber frame house, nor the relative solidity of 'modern' houses. These 'half solid' houses mix a wide variety of purchased materials, and are essentially unable to resist a typhoon.

- In Vinh Hai, 91% of houses are classified as 'half solid' and very vulnerable (and 8% live in even frailer structures).
- In Phu Da 65% of the houses are 'half solid', and a further 34% are very weak.
- In the peri-urban context of Huong So, 77% of houses are 'half solid' and a further 9% are built of bamboo and thatch.

Together, these figures give some notion of the extent to which existing habitat is vulnerable, with an average over the three communes of 78% of families living *and investing* in houses that are not storm resistant.

The detailed studies of individual houses in the three communes and those studied in Hué permit a break down into three groups of house type according to cost and the corresponding extra costs of typhoon resistant strengthening:

| House type based on construction costs per m ² | Vulnerability | Typical extra reinforcement cost compared to capital cost of house | Notes |
|---|-------------------|--|--|
| Less than 10 \$/m ² | Total | 100% | Very little of existing structure to be retained |
| Between 10 to 30 \$/m ² | Very high High | 44% or less, falling to 15% | Structure and materials can be recuperated or strengthened |
| More than 30 \$/m ² | Low | 5 - 13% | Small level of strengthening work |

The majority of houses is in the middle category and they can be strengthened at less than half their capital cost. More detail on this analysis is available in *'Habitat et Renforcement Anticyclonique. Etude Préliminaire'* DW, March 2000.

Phase 2.3. Local assessment of the project activities: the 1st Workshop

In March 2000, DW organised the first workshop in what will become a series of evaluations and exchanges with all levels of local participation, and which at each stage provides a mandate for the next phase of the project.



The workshop brought together the project team and the representatives of the pilot communes, and participants at the level of the Province, the Districts and the Communes concerned over five days. During the workshop participants were involved in village surveys and the definition of strategies for the project in the next period of work. A series of large information panels have been produced for use in this workshop, and there has been local TV coverage.

The results were encouraging in terms of participation:

- The project team were able to make a clear presentation of the issues that the project addresses;
- The main objective, that of 'changing the popular attitude about taking preventive action to reduce storm damage' was widely appreciated by the participants;
- The participants recognised that village animation activities are essential for the programme.
- The project methodology based on work in the communes will be integrated into the work of the Provincial Committee Storm Damage prevention.

The workshop helped define several issues:

Commune organisation: the need for good liaison between the commune and the project has resulted in the adoption of a proposal to create 'Commune project management committee', representing different groups in the community, which include, for example, family representatives, members of the Women's Union, and representatives of Peasant Organisations.

Animation: the seminar confirmed the need to communicate, by all means possible, the 10 key points of Typhoon Resistant construction which define the basis DW used in the past (and which remain valid) for the reduction of typhoon vulnerability in shelter in Vietnam.

Animation activities need to be frequently repeated over the duration of the project. Participants proposed both contemporary 'classic' Vietnamese communication methods, and approved the use of theatre, training and animation in local schools, and recommended the development of small sub-projects that can bring together the population to participate in activities that relate to reducing storm damage vulnerability.

House strengthening: care needs to be taken in selecting beneficiaries in the programme, based not on a fixed average sum per beneficiary family as shown in the project budget, but on a selection of social criteria that involve single women, the aged, and an assessment of financial capacity. At the same time, concern was raised for the case of people whose house is so frail it cannot be improved, and for the need to respect cultural tradition in the solutions that are proposed. The issue of flooding has also become paramount, and in many cases the answer lies in a better choice of site, which depends on the support of the commune authorities

During the workshop, specific themes have also been discussed, including:

- the need to assess the feasibility of developing a credit system for house strengthening;
- the potential for a positive impact through undertaking small public works programmes in the context of the project, which promote the principles of storm damage prevention, directly help reduce vulnerability and directly involve large numbers of inhabitants.

The second period of activities in the Pilot Communes in Phase 2 included:

- 2.4. Developing animation and communication activities
- 2.5. Pilot demonstration of strengthening on houses
- 2.6. Local assessment of the project activities: the 2nd Workshop

Following the 1st Workshop, the project has developed both the animation and practical demonstration activities in each of the 3 pilot communes. In effect, whilst the practical demonstration activities are at the centre of the project's *animation* programme, the wider use of media, events, handouts, training and publicity all help to focus attention on 'what can *realistically* be done'.

2.4. Animation and communication.

Animation and awareness raising activities in the villages aim to move damage prevention higher up the list of family priorities. Since the majority of the population is poor, and in general a family spends what money it may have on sustenance and social obligations, such as the often-considerable costs of marriages and funerals, poverty is often visible in the poor quality and mixture of purchased and gathered materials used in housing. The issue, therefore, is to stress that whilst preventive action costs money, greater poverty follows in the wake of the house being destroyed.

As a start, after the 1st Workshop, the official creation by each commune's People's Committee of a 'Commune Project Committee' on Storm Damage Prevention has provided a commune level focus with the participation of local authorities and the presence of local unions, labourers, family representatives, who together genuinely represent the population. The CPC has in turn provided the backing, in collaboration with the DW Project office, to undertake a variety of animation and awareness raising activities in their own commune.

The project team has also been reinforced after the 1st Workshop with the addition of three animation assistants. They have contributed to the development of different actions.

The Animation activities in the pilot communes since April 2000 have developed and explored a variety of means for communication.

Awareness raising in schools



One area of animation has been to work particularly through local schools. The project organised training sessions on the theme of 'Storm Damage Prevention' for teachers in each commune's schools (18 teachers in Vinh Hai, 55 in Phu Da, and 58 in Huong So). This enabled the teachers to integrate the theme into course work for 4th and 5th grade pupils, who in turn carry these ideas and issues back to their parents.

Thanks to the teachers' engagement in the project, the children participated in parades through the commune, with banners, flags, and 'anti-typhoon' slogans – a total of 920 children in three different events in their respective communes.

In parallel, the Project organised a drawing competition on the theme of 'Typhoons', for the 4th and 5th grade, and the drawings have been prepared as part of each child's homework, thus involving the parents. There have been strong indicators to suggest that this is

for many children their first exposure to the issues and actions to be taken about typhoon damage prevention. Prize giving for the competition took place at the end of term ceremonies, and involved a larger group of children and parents.

General animation and awareness raising in the communes

The project has prepared various actions in each commune:

- ❑ Large general information panels have been placed in 3 or 4 locations in each commune: they present a single 'anti-typhoon' slogan.
- ❑ One thousand posters have been printed that present the ten key points of typhoon resistant construction (and the siting of buildings), and these have been distributed and stuck up by families and officials in each commune.
- ❑ One thousand simple picture strip manuals about typhoon resistant construction have been distributed.
- ❑ One thousand hand held fans with an image and a slogan have also been distributed to the public.

In addition, local TV, Press and Radio have made a series of announcements about the project's activities. The project has also been establishing a video record of the work that



has been done to date.

Theatre on the theme of typhoon damage prevention

The Animation team have also worked with singers and actors from Phu Da to develop a theatre and concert programme, which has been shown so far in each commune to a total of 4000 people, where the hand held fans were also distributed. The main theatre scene tells a story that highlights the need to respect the ten key points and take preventive action against storm damage. A 40 minute TV /Video version is planned.

Conclusion

The amount of animation work in the three-month period since April has been considerable. If the animation team members themselves feel at times that their work is less visible on a daily basis when compared to the example of houses that have been strengthened, the impact cannot be underestimated of regular animation activities that reach out to far greater numbers of people than is possible in working on individual houses.

2.5. The Pilot programme of house strengthening in the 3 communes

In May and June, the project has worked on strengthening and rebuilding 8 houses in the three plot communes, and construction of one new demonstration building. Two of the houses, in Phu Da and Vinh Hai, will serve temporarily as a Project base in the commune, including the new demonstration house in Vinh Hai that will be allocated later to a family living actually in a precarious structure. Both these houses serve as a demonstration of a variety of techniques that can be used in the commune.

The aim of the programme at this pilot stage has been to learn about and test practical techniques for house reinforcement, and to show that these are simple, make use of locally available materials, and are within financial reach for many families. Given that this stage of the Project has been a testing period, different solutions have been demonstrated to address one specific type of weakness, such as holding down the roof covering.



The solutions have, at this stage, been very varied, ranging from:

- Simply reinforcing doors and windows;
- Reinforcing the complete frame and roof structure of the house;
- Rebuilding the house making use of materials recuperated from the old house.

Overall, the tests have shown that a resistant house, with a good structure and good joints, with good bracing and good doors and windows, costs on average 30 \$US/m² with a 'vulnerability reduction' component in the order of 15% of the total cost.



In the pilot phase, the Project has financed the major part of the cost of testing ideas on different houses, but there has already been a significant level of family contribution, in the form of using existing materials, providing additional materials, and contributing labour.

The work has been undertaken on the basis of detailed surveys of each house, and an agreement established with the owner about contributions by the family and the project. In some cases, families have also been stimulated by the opportunity presented by the project to undertake other home improvements.

Out of the 8 houses that have been reinforced since May 2000, 5 belong to small and aged families with little ability to help, and 3 to large poor families. The houses selected have also covered almost all types of building, including:

- Traditional house with wood frame (2)
 - Traditional house with bamboo frame (2)
 - Traditional bamboo frame house with cement block walls (1)
 - Contemporary house with wooden roof frame and corrugated roof sheeting (1)
 - Contemporary house with wooden roof frame and cement block walls (2)
- and
- New demonstration house designed by the project (in Vinh Hai) (1)

Work on strengthening these houses provided the opportunity in each commune of demonstrating different strengthening methods. But in addition there has been the opportunity to test possibilities for local production of metal elements used to hold different components together (joints between foundations and columns, between columns and roof frames, and between components in the roof.). For more detail on the demonstration activities in the Pilot communes, see '*Habitat et Renforcement Anticyclonique – Bilan Travaux Pilotes d'Amélioration de l'Habitat*' DW, Juillet 2000

Sub project feasibility studies

In parallel with these village trial activities, feasibility studies for demonstration activities with a high exposure level in the commune have been undertaken as follows. At the request of the People's Committee in the communes of Vinh Hai and Phu Da, two sub-projects have been reviewed for inclusion in the project that have potential for making large groups of people aware of the project objectives and actions for the prevention of damage to shelter:

- the reconstruction of Vinh Hai market, which was damaged in the 1999 storms,
- the rehabilitation of the canal and small port at Phu Da that provides shelter to fishing families who live on their boats, and that had become inaccessible.

In the case of the canal/port restoration activity, it will provide safe shelter to boat based families, and brings together over 4 weeks 300 workers from the commune. They will work on dredging of the port and participate daily in activities that promote awareness about typhoon damage prevention - through animation activities and through the strengthening of several houses along the canal during this period.

In the case of Vinh Hai Market, the rehabilitation of damaged buildings will bring together 20 masons and carpenters, 12 village chiefs, and 8 heads of families. They will participate in a preliminary workshop on typhoon damage prevention and then in daily training sessions at the start of each day's work on the construction site during the 12 weeks that rebuilding will last. The project focus here is also on making users of the market aware of practical techniques for house strengthening.

Both these programmes will start in July 2000, with costs shared between the commune and the project.

Phase 2.6. The 2nd local assessment workshop

In June 2000, DW organised the second workshop with local participation, to review the work done since April 2000. The workshop continued the process of popular

involvement in the orientation of project activities. This three-day workshop in Hué brought together most of the participants of the 1st Workshop, but showed a slight increase as well in higher Provincial level participation.

The project was able to bring people up to date on the technical and animation work that has been done in the three pilot communes using presentations and ten large panels of information and photos. Participants visited the houses that have been strengthened in Vinh Hai and Huong So, and attended a concert and 'typhoon damage prevention' theatre show put on by the project in Huong So.

The participants then worked over 1 day in three groups, and produced a summary of their observations and recommendations.

The conclusions presented by these groups have been positive and constructive, with the following main points:

- ❑ The project has already developed very close working relations with the target populations in the three communes;
- ❑ The establishment of the Commune level 'project committees' has been appreciated and already represents a real force for the mobilisation of the population and the continuity of the project. But individuals in the committees need be given more specific responsibilities in the commune and thus increase the active role of committee members;
- ❑ Animation activities need to be repeated frequently in each commune, to reinforce the message;
- ❑ In future house strengthening work, beneficiary families must make a contribution to work on their own homes. The project needs to establish an upper limit for its contribution to a family, now that the pilot phase is over. The needs are so great that the active mobilisation of each family is a fundamental need;
- ❑ As well as demonstrating the strengthening of houses, the project needs as well to encourage people to maintain their houses – otherwise vulnerability will again increase.

DW would however like to see greater participant involvement in preparation of the extension of activities to neighbouring communes, and already animation activities in these communes will be started by the project in July 2000.

At the end of the workshop, DW handed out a ten-point competition questionnaire, in order to assess levels of understanding on matters related to houses strengthening choices, on priorities in the communes and on animation activities.

Phase 3: Extension of activities in Pilot communes, and extension to neighbouring communes

Phase 3 extension activities have begun in July 2000, and will continue through 2001. During the remainder of 2000, practical work on house strengthening, accompanied by mobilisation projects and ongoing animation activities will continue in the three pilot communes, whilst animation activities begin in 7 more neighbouring communes.

Specific activities and inputs are:

Rehabilitation projects in Vinh Hai and Phu Da:

In July 2000 the project has carried out the detailed studies for the Vinh Hai Market Reconstruction project and the Phu Da Port rehabilitation project, and work is starting in mid July. In both instances the programme of animation, training and demonstration will run in parallel with the rehabilitation work.

Extension of house strengthening:

Following the pilot demonstration activities in the three communes, these will now be extended. In each commune, a short list of 60 to 90 potential participating families has been drawn up by the People's Committee, base on an assessment of poverty and the degree to which their home is vulnerable. In the target villages the village chief reviews the list of candidate families with the inhabitants. The project will then further review each case on the basis of the work that needs to be done to each house, and the capacity of the family to participate. A ceiling of \$350 per house has been set for project investment, any non-typhoon related house improvement is at the cost of the family, and in all cases, even where the value of house strengthening is less than the ceiling, the family must participate. In the period between mild August and November, the project will aim at about 20 houses per month to be strengthened.

The project team expansion:

The team has been increased by the addition of an extra technical assistant, who will help on building supervision. An additional animator will work on pilot studies for setting up a credit system for the improvement of houses and she will also work on communication and exchange with the commune schools.

Starting extension to neighbouring communes:

Animation activities are starting in 7 new communes, and will continue through to November, in preparation for the extension of practical activities on strengthening houses. These animation activities will include providing information on the project objectives through the use of loudspeaker systems, and poster distribution. Manuals on house strengthening will also be distributed to families in the communes. There will be sessions with local schools and a repetition of the drawing competition, and a series of performances on the theme of preventing typhoon damage will be held.

Work-plan

The revised timetable presented in the January 2000 progress report has been respected in 2000.

The following table outlines current programming against the outline work plan:

| Phases | Initial outline timetable | Revised timetable | Notes |
|--|----------------------------------|--|--|
| 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 |

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| <p>Phase 3. Activities undertaken by Canadian agencies and the project team to share experience with neighbouring districts and provinces. Programme active in several communes.</p> | <p>Months 20-32: Dissemination to end of year</p> | <p>Months 16 – 32 Regional dissemination of project results planned end 2001</p> | <p>Started in 7 communes</p> |
|---|--|---|------------------------------|

5. Identification of target groups and risk

a) Reach

The process in place for selecting target families has been described above.

b) Risks

Humanitarian aid for building houses or core houses for families who suffered in the floods at the end of 1999 increased substantially in the beginning of 2000 along with the number of organisations providing a variety of assistance. There was a risk that the population would have increased expectations of receiving material assistance for new house construction, which would make the work of the project harder. But in practice this does not appear to be having a negative effect on the operation of the project, and interest levels in the communes are high, as is recognition that preventive strengthening of houses is a realistic approach to reducing vulnerability in the community.

The next phase of the project up to November 2000 is the typhoon season, and there are inevitable risks that programming may be periodically disrupted. Access to one the communes is by boat and motorbike only, and is not always workable.

Some of the houses that have been visited are primarily at risk because of their bad location, and the project has already relocated one house in Phu Da to a less exposed site. Where the site is a risk factor, strengthening a house in its present location is not always a viable option. The project has held discussions with the Committee for Flood and Storm Control about the need for mapping of flood and storm risk areas, on the basis of which more guidance can be provided about the location of settlements and individual buildings, and we consider this to remain an important issue..

6. Management and partnerships

The project structure is as follows, and has been consolidated in Thua Thien Hué, whilst also having national registration:

- ❑ Development Workshop is registered by PACCOM (People's Aid Co-ordinating Committee) to operate in Central Vietnam
- ❑ A convention has been signed between the 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 coordinator.
- ❑ The Committee for Flood and Storm Control is a formal partner, and designates a person to participate in project workshops and project review meetings.

The provision by ENDA Vietnam of local administrative support to DW in 1999 of has been replaced by DW's own project staff in Hué.

Annexe 1: Activities and available reports

Activities year 2000 :

T = Team O = Organisation H = Housing A = Animation & Awareness-raising

TR = Training

1 US\$ = 14 000 Dongs

| N° | Activity Completed / Ongoing / Planned | Date in year 2000 | Content / Objectives | Specific budget | Beneficiaries | Documents V=Vietnamese ; F=French |
|----------|--|-------------------------------|--|--------------------|---|--|
| T.1 | Setting up | January – February 2000 | <i>Setting up office</i> Renting, repairing house Equipment, furniture Computer equipment Telephone, Internet | | | |
| T2 | Recruitment of Local Team / Phase 1 - Hué Coordination Team | January 2000 | <i>Recruitment of local Team</i> Administrator Head of Communication Technical Advisor Architect Engineer Interpreter Secretary | | | |
| O.1 | Selection of Pilot Communes | February – March 2000 | <i>Selection by the People's Committees of Thua Thien Hue Province and of Districts :</i> Huong So Commune / Hué City Phu Da Commune / Phu Vang District Vinh Hai Commune / Phu Loc District | | Huong So: 14 322 h. (2 790 families) Phu Da: 10 137 h. (1 934 families) Vinh Hai: 2 700 h. (640 families) | <i>Rapport de Présentation des 3 Communes (V, F)</i> |
| H.1 | Preliminary surveys An Cuu - Hué | January 2000 | Study of housing typology and of possibilities for typhoon-resistant strengthening (4 houses) | | | <i>Habitat et Renforcement anticyclonique / Étude préliminaire Hue / Janvier 2000, 38 p. (V, F)</i> |
| H.2 | Study Housing and typhoon-resistant strengthening Huong So, Phu Da, Vin Hai | February – March 2000 | Study of housing typology and of possibilities for typhoon-resistant strengthening (3+3+3 houses) | | | <i>Habitat et Renforcement anticyclonique / Étude préliminaire Huong So, Phu Da, Vinh Hai / Mars 2000, 55 p. (V, F)</i> <i>Habitat et Renforcement anticyclonique / Études préliminaires - Synthèse / Mars 2000, 9p (F)</i> |
| TR. 1 | Seminar "Prevention of Typhoon Damage to Housing" Hué | 23-25 March 2000 | <i>Objectives</i> To mobilise project partners on the short term and long term benefits of prevention To specify, using preliminary studies, the methods of intervention of the project in the | 14 500 000 Dgs | <i>Participants</i> <input type="checkbox"/> Province, Districts (11) <input type="checkbox"/> Commune s (3 x 6) | <input type="checkbox"/> Panels <i>Project VIE/85/019 Housing and typhoon- resistant housing / Examples 10 principles of typhoon-resistant</i> |

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| | | | communes <i>Conduct</i> 5 1/2 days (with surveys in Huong So) | | | <i>building</i> <input type="checkbox"/> Preparatory documents <i>Programme du Séminaire (V, F)</i> <i>Présentation du Project (V)</i> <i>Dossier de base sur les cyclones (V)</i> <i>Études sur l'habitat (V)</i> <input type="checkbox"/> Report <i>Compte-rendu du Séminaire (F)</i> <i>Dossier des Interventions (F)</i> |
| A.1 | Hué TV Information | March 2000 | Information on the Seminar (1') on Hué Television (shown 4 times) | | | Thua Thien Hué Province |
| A.2 | Video Film / Seminar | March 2000 | Documentary on the way in which the Seminar was conducted | 1 400 000 Dgs | | |
| H.3 | Study on strengthening housing / Trial houses | March - April 2000 | Detailed study on trial work to strengthen housing in the 3 communes (3+3+2) | | | <i>Habitat et renforcement anticyclonique / Étude : Travaux pilotes d'amélioration de l'habitat / Avril 2000, 42 p. (V, F)</i> |
| O.2 | Creation of Commune Typhoon Damage Prevention Committees | March 2000 | Organisation, and official setting up by the Commune People's Committee (6 to 12 members) | | | 3 Communes <i>Organisation du Comité (V, F)</i> <i>Décisions de Comités Populaires (V, F)</i> |
| T.3 | Recruitment of Local Team / Phase 2 - Animators | April 2000 | Reinforcement of animation team 3 assistant animators | | | |
| T.4 | Weekly meeting of the Project Team | April → 2000 | Coordination, planning of activities | | | <i>Compte rendu hebdomadaire (F)</i> |
| H.4. a | House strengthening trials Huong So | April - May 2000 | 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 - | <i>Habitat et renforcement anticyclonique / Bilan Travaux pilotes d'amélioration de l'habitat / Juillet 2000, (V, F)</i> |
| H.4. b | House strengthening trials Phu Da | April - June 2000 | 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 | <i>Cf. H.4. a</i> |
| H.4. c | House strengthening trials Vinh Hai | April - June 2000 | 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 - | <i>Cf. H.4. a</i> |
| H.5. a | Project House / Phu Da | April - June 2000 | 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 | <i>Cf. H.4. a</i> |

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| H.5. b | Project house / Vinh Hai | April – June 2000 | 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 | <i>Project détaillé (V)</i> |
| A.3 | Panels (10) | April – May 2000 | 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 2000 | Poster showing 10 principles Size A1 / Public places | 1 800 000 Dgs | | Poster |
| A.5 | Manual (1000) | April – May 2000 | Simplified typhoon- resistant building manual (in cartoon-strip form), 20p. | 4 600 000 Dgs | | Building manual |
| A.6 | Fan (1000) | April – May 2000 | Manufacture of 1000 fans, with image and slogan | 1 200 000 Dgs | | Fan |
| A.7. a | School Animation / Training | April – May 2000 | Training sessions for teachers (1/2 day) / Prevention - typhoon hazards | 3 940 000 Dgs | 130 teachers in the 3 communes | <i>Dossier Formation / Écoles</i> |
| A.7. b | Drawing competition | April – May 2000 | 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 2000 | Children's "Parade", with flags and banners, of mobilisation on damage prevention | 3 250 000 Dgs | 800 children | |
| A.8 | Performance / Theatre | April – June 2000 | 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 2000 | 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 2000 | Study on the reconstruction of the Public Market (partly destroyed in the November 1999 floods) | | | <i>Etude de faisabilité Marché de Vinh Hai, Juin 2000 3p. + plans (V. F)</i> |
| H.7. a | Feasibility Study: Phu Da Canal | May – June 2000 | Study on improving the canal of the Sampan- dwellers Village (partly filled in during the November 1999 flooding) | | | <i>Etude de faisabilité Canal de Phu Da, Juin 2000. 3p. + plans (V. F)</i> |
| TR. 2 | Seminar Evaluation Phase 2 Progress of activities | 21 – 23 June 2000 | Review of phase 2 of the project, and preparation of the extension phase of activities | 23 300 000 Dgs | <i>Participants</i> <input type="checkbox"/> Province, District (8) <input type="checkbox"/> Commune s (27) | <input type="checkbox"/> Panels on: Housing and typhoon- resistant strengthening / Examples of pilot work Animation Activities Children's drawings <input type="checkbox"/> Preparatory documents <i>Programme du Séminaire (V, F) Rapports d'activités (Général, Animation, Technique) / Juin 2000, 18p. (V, F)</i> |

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| H.6. b | Technical Study: Vinh Hai Market | June – July 2000 | Architectural and Technical Study of the Market; organisation of work | | | <i>Dossier de présentation Marché de Vinh Hai (V) Dossier de Plans (V)</i> |
| H.7. b | Technical Study: Phu Da Canal | June – July 2000 | Topographical survey and plans for embankments and masonry banks | 2 500 000 Dgs | | <i>Dossier Technique (V)</i> |
| H.6. c | DWF - Vinh Hai Protocol | July 2000 | Protocol between DWF and the Vinh Hai People's Committee for the reconstruction of the Market, and the training programme | | | <i>Accord DWF-CP (V, F)</i> |
| H.7. c | DWF - Phu Da Protocol | July 2000 | Protocol between DWF and the Phu Da People's Committee for dredging the Canal, and the animation programme | | | <i>Accord DWF-CP (V, F)</i> |
| O.3 | Housing Improvement Programme Selection of beneficiary families | July – August 2000 | 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) | | | <i>Méthode (organigramme) (V, F) Listes provisoires de familles (V) Enquêtes sur chaque famille (renforcement de l'habitat, capacité de participation de la famille) (V)</i> |
| A.1 0 | Animation programme Phu Da Canal | July 2000 | Animation programme, theatre, loud speakers, competition during the dredging of the canal | 5 150 000 Dgs | 300 people taking part in canal works | |
| TR. 3 | Training programme Vinh Hai Market | July – September 2000 | Training programme for building workers and village leaders : 1 day + regular sessions for the workers during work on the Market | 2 000 000 Dgs | | |
| H.7. d | Phu Da Canal Works | 10 July to 5 August 2000 | Work carried out by the sampan-dwellers community and inhabitants of the Commune Dredging: 6 500 m ³ Bank protection | Project participation 70 000 000 Dgs | Participation - Commune: 10 300 000 Dgs Community: 54 750 000 Dgs | |
| H.6. d | Vinh Hai Market works | 15 July – 30 September 2000 | 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 84 000 000 Dgs | Participation by the commune and the market traders 20 000 000 Dgs | |
| H.8 | Strengthening homes | July onwards 2000 | Extension of the programme based on the priorities (cf. O.3) | Maximum project participation per home 5 000 000 Dgs | 5 to 20 homes / month Financial participation by the family | |
| | | | | | | |