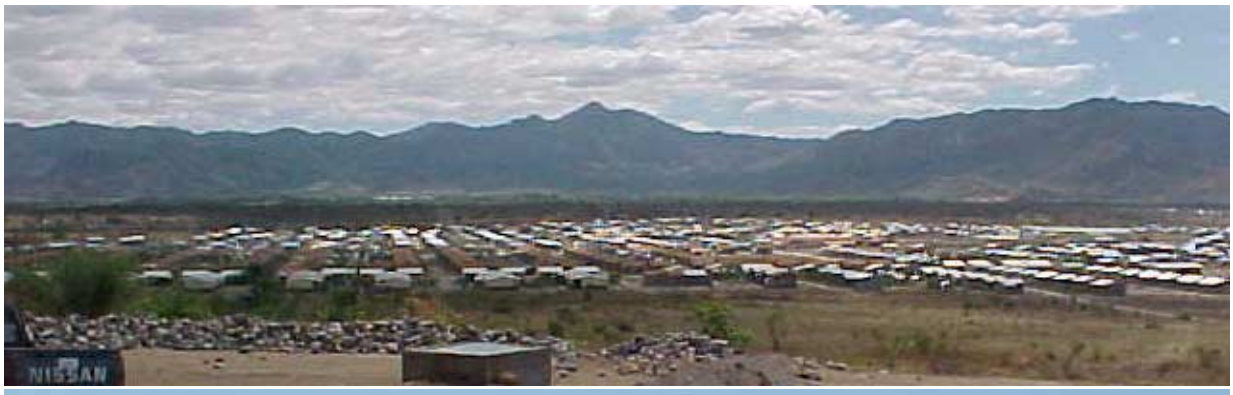
Central America Hurricane Mitch, Global Plans 1998, 1999 and 2000

ECHO/EVA/210/2000/01007

Rehabilitation sector



Period of evaluation mission:
18th of January until the 20th of February 2001

Name evaluator:
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EXECUTIVE SUMMARY

Subject of the sector evaluation : Housing and rehabilitation

Region and countries of operation: Central America - Nicaragua, Honduras and Guatemala.

(note: originally this evaluation should have covered El Salvador (ES) as well. As an earthquake (1st) took place in this country [13th of January 2001] a few days before the field work for this evaluation started an emergency aid needs assessment was carried out instead by the consultants.)

Name(s) of main partner(s): ECHO field officer for Honduras and later Nicaragua, Mr. Jocelyn Lance.

The following NGOs, which carried out ECHO-funded projects, were visited by the consultant:

Guatemala: COOPI, Movimondo-Molisv, PTM
Honduras: Nuova Frontera, CINS, ANNF, GOAL, Atlas Logistique
Nicaragua: Solidaridad International de España, Cruz Roja de España, Movimondo-Molisv, Terres des Hommes, ACSUR-Las Segovias, CESP-HELP, Acción contra el Hambre, Agro Acción Alemana

Contract numbers: *ECHO/TPS/210/1998/12000 (1st Decision, 4 Nov 1998)*
ECHO/TPS/210/1998/15000 (2snDecision, 21 Dec 1998)
ECHO/TPS/210/1999/06000 (Global Plan 1999, Oct 1999)

ECHO/EVA/210/2000/01007 (this evaluation!)

Dates and duration of operation: The evaluation covers the period from November 1998 until September 2000 when ECHO funded projects should have been finalised.

Description of the evaluation:

Dates of evaluation:

Briefing Brussels	*9 Jan 2001*
Field work	*18 Jan 2001 – 20 Feb 2001*
Debriefing Brussels	*4-5 Apr 2001*
Evaluation report	*28 Apr 2001*

Name of consultant: Bernd SCHRIKKEMA (for Quest-Consult)

Purpose and Methodology:

Evaluation of the ECHO's performance in the housing and rehabilitation sector during the post-Mitch period in Central America with emphasis on *lessons learnt*. Assessment of its performance was carried out by field visits to ECHO-funded projects, interviews with partners and stakeholders and file research on implementing partner reports at the regional ECHO desks.

Conclusions:

Relevance

- Mitch left approximately 1.5 M. people homeless. ECHO and ECHO funded NGOs were in the region prior to Mitch so an understanding of the context and analysis of the post Mitch situation was adequate.
- Response, assessment, identification of beneficiaries and analysis of needs was quick and efficient. Housing and rehabilitation was a relative new field of activity for many NGOs and for ECHO itself. In many cases delay of up to a year in the implementation of projects was therefore incurred.
- The main bottleneck was the acquisition of suitable land for resettlement of beneficiaries. The time constraint for project implementation was a significant constraint for many NGOs.
- In many cases viability of rehabilitation projects was secured by continuation of

the project by the NGO with external funding.

Effectiveness

- All NGOs whose projects were visited, were able to meet their minimal project objectives put forward in their proposals. This is regarded as an achievement in itself as most NGOs had little to no experience at all in this sector. In general the participation of beneficiaries was successfully achieved although consulting the beneficiaries during the project planning phase would have increased the effectiveness even more. Furthermore the NGOs managed to distribute property ownership and land titles fairly.
- Involvement of beneficiaries in planning and design phase of the project could have increased the effectiveness of most projects significantly. Using scale models of houses and building sites (instead of technical drawings) is advised for communication purposes to beneficiaries.
- Cost-effectiveness has been difficult to assess. Narrative and financial reporting on project progress was carried out on a regular basis by NGOs. The budget breakdowns in the financial reports do not always give sufficient detail for making an adequate cost-effectiveness analysis. The detailed budget formats presented by most NGOs in their financial reports (including the final) may be adequate for normal development projects but infrastructure projects demand a more specific kind of financial management and control (both for the donor but even more so) for the supervising NGO as a powerful management control tool. Maximum funding per house was set to Euro 500, which prevents exorbitant spending per house. Material costs and prices for external contracted labour could not be compared between projects per budget line item. It is recommended that ECHO field or NGO project staff work out a more useful budget format which at the same time enables financial comparative analyses of data for example the amount of Euro per m^2 or per m^3 of constructed house, per school building, health clinic or road and per project, per beneficiary, per valuable construction material such as cement and steel. This observation also applies for water and sanitation projects. Good examples of adequate financial reporting (including valuable indicators!) are those of Care France/International and Atlas Logistique France.

Efficiency

- The efficiency of NGOs was hard to assess from the brief project visits and project reports. The fact that the project objectives were met within the project running time of 6 months with sometimes an extension of 3 months points in the direction that the management and logistical capacity of the implementing partners was appropriate. Quality of infrastructure was assessed as sufficient, however in two cases some minor technical shortfalls were identified, which were promised to be corrected as soon as possible.

Co-ordination, coherence and complementarity

- Co-ordination and coherence of actions and interventions between NGOs and/or local authorities was evident in all projects. The level of success and intensity of this co-ordination varied per project: Complementarity meaning the way different activities (to be carried out by different NGOs or authorities) should work in synergy, was often a problem. Sometimes houses were finished while water and sanitation had yet to be installed.

Impact and strategic implications

- Rehabilitation projects primarily in rural areas where beneficiaries could stay relatively close to their original environment, had high prospects of successful future development. Examples (of visited projects!) are Omoa in Northern Honduras and Comayagua in Central Honduras and Masaya in Nicaragua. For the majority of other projects, in peri-urban and rural areas alike however the situation does not look very promising. These projects can be characterised by the fact beneficiaries were relocated far from their original location. The main criticism is that the new resettlement had been situated on marginal grounds and/or where access to work was hard and survival very difficult. Hunger, serious social problems and disintegration of families occurred because of extreme poverty and lack of prospects. In one case, houses were dismantled and abandoned.

Visibility

- Visibility of ECHO as funding agency was good. Beneficiaries had a notion what was ECHO being an organisation of the European Union. On all products the ECHO logo was present and visible. However, the role ECHO played was for most beneficiaries completely unclear. Visibility in the written press especially in comparison to other EU agencies was little.

Horizontal issues

- Gender aspects were taken into account by most NGOs especially with regard to land titles and property ownership. When a couple was not legally married the ownership of the house would go to the woman.
- Women should have been consulted in the project planning phase to adapt the house better to their needs and (sanitary, cooking and washing) habits.
- Key in linking emergency better to development actions with regard to the rehabilitation sector is to construct houses in a place where people are able to regain an economical and ecological sustainable way of living. The main bottleneck, and this is commonly known, is the acquisition of suitable land. This, in turn, is related to the backward social and political status quo in the region. However positive examples of close co-operation between local authorities and NGOs prove that a lot can be achieved despite these general constraints (Esteli, Nicaragua).

Recommendations:

- It is recommended that the *piso-techo*[1)] concept should be used in the future as base-line option for providing provisional shelter with an outlook to a permanent solution. The *piso-techo* is a durable and secure shelter with the possibility to construct a complete house of it with local know-how and materials. It is considered a valuable and cost-efficient solution to supply a temporary roof for the homeless and providing a solution for the construction of a permanent house in the long run.
- The *piso-techo* concept should be tailored to the needs of a household in terms of surface area, lay-out and orientation proportional to the size and needs of the

[1] *Piso-techo* concept is a construction which can be used as a semi-permanent shelter, made of a cemented floor, with minimally 4 supporting vertical pillars made of either reinforced cast-concrete or a heavy wood sort and a wooden roof support frame with galvanized corrugated iron sheetings as roof cover. The walls are made of fibre-reinforced plastic sheeting. The structure is earthquake resistant and costs less then 500 Euro and can be transformed in a normal house with local materials and know-how by adding windows and door frames and making walls of mud bricks.

family. The one-size-fits-all solution by making one standard house for every family, indistinctive of its size, has, in some cases, let to social unrest.

- Involvement of beneficiaries not only during the construction but also in the planning phase is recommendable. Women should especially be consulted in that respect, regarding placement of kitchen, washing slab, sanitary facilities, lay-out of rooms and outdoor activities.
- Site assessment for re-allocation of homeless is a crucial and responsible task for successful implementation of a rehab project. A go-no go decision by the donor has to be incorporated in the project implementation cycle to avoid failures. This assessment should be carried out by an independent consultant.
- More pressure and negotiation margins should be created at local and/or regional administrative levels. Rehabilitation projects should be linked to other interventions (even if they are financed by other donors) in the same region or municipality. Indifference or non-cooperation from the side of the local authority may then be answered by blocking other (development) interventions as well. Stronger co-operation between the NGO, donor(s) and local/regional authority is therefore crucial and strongly recommended. Better co-operation can be stimulated by institutional strengthening of the local authorities. Good examples are the projects in Esteli, Nicaragua and Omoa in northern Honduras. Also ECHO has a more active role to play here and the field staff should be trained to facilitate and actively participate in negotiations between local authorities and NGOs.
- Rehabilitation projects should be cancelled if a site assessment is rated negative.
- Linking emergency to development, and co-operation between donors, NGOs and local authorities: These two themes in relation to the rehabilitation sector are not specific for Central America or Mitch. It maybe more productive to organise a seminar to bring different project experiences in this sector in the limelight and to work out institutional alternatives for improvements.
- Recent developments in El Salvador mean that phasing out of ECHO in the region (meaning the whole of Central America) is not viable. The region is and will continue to be prone to natural disasters. It is essential for ECHO to realise that presence in the region is and will continue to be needed in the future.
- In times of relative calm projects which were started during an emergency phase and which need long-term attention -like the economical, social and ecological consolidation of (new) resettlements sites and O&M of water & sanitation projects- should get priority in receiving prolonged funding from development oriented EU-services like IBDG and DGVIII. This again stresses the need for more intensive co-operation between different units of the EU.
- ECHO should become more flexible in expanding and reducing its emergency programme management team proportional to (new) emergency situations. In terms of human resources management a pool of experts, a kind of rapid deployment task force from the development services and/or from NGOs present in the field should be formed to assist in ECHO-emergency and especially -post-emergency programme management. In case of an emergency these people are well equipped and prepared to assist with the emergency programme management tasks. This would also fit well in the partnership concept between ECHO and the implementing NGOs. In this way regional presence could also be better secured without the need to keep an expensive field office open in times of relative calm.
- Also both at field and at the administrative level in Brussels it is recommended to actively recruit experts (with field experience) from NGOs as they have a notion about problems that occur in the field.

Lessons learnt:

- NGOs have proven to be very reliable, efficient and flexible partners in face of an emergency situation. They are able to implement rehabilitation projects without

prior knowledge. A presence in the field and knowing the local conditions are important success factors.

- Rehabilitation projects (with reallocation of people) cannot and never will be finalised within 6 to 12 months, the maximum implementation period of an emergency funded ECHO project. Continuation of the intervention after ECHO has stopped funding should therefore be likely and probable, otherwise a project should not be approved in the future.
- Rehabilitation projects have resulted in a wide range of types of houses. The *piso-techo* concept has proved to be a safe, sustainable and cost-effective concept to serve initially as an emergency shelter with the possibility to construct a durable house of it with local materials and know-how later on. This concept could be used as point of reference for future rehab projects.
- Site acquisition for rehabilitation projects is a crucial and responsible task which has been so far been underestimated by both the donor and the NGO. In the future this should get much more attention. It is recommended to implement a go-no go decision based on an assessment of an independent consultant and to play a more active role in the negotiations with local authorities for proper land acquisition in the future.
- Bad site selection has proved to cause unacceptable problems for the beneficiaries, both economically and socially.
- If a site assessment for permanent housing turns out negative a rehab project should be stopped because it may do more harm than good in the end.
- Linking emergency and development remains a dead letter as long as ECHO and development agencies within the EU, especially PRRAC, keep on operating under separate administrative umbrellas. ECHO traditionally carries out typical emergency operations but it also gets involved in the grey area of rehabilitation where often immediate action is needed but where its interventions have a long-term impact. This is especially true for the rehabilitation, and water & sanitation sector. In these cases (administrative) integration of ECHO or at least strong inter-co-operation with the development services of the EU is strongly recommended.
- Disaster preparedness may point to a wide range of interventions from reforestation to awareness building among a population at risk. ECHO has to decide which activities can or cannot be justified under its mandate.

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ACKNOWLEDGEMENTS

At this point and thinking back of this evaluation which has been a very important trip to me personally because I lived in Nicaragua during the rough 80-ies, I feel a very lucky person to have been able to return to the soil which gave me so much without knowing it. I have met so many nice and inspiring people, both related to the job and on the street that I now became awesomely aware of that.

Then, in the making of this report I want to thank my wife for her patience, care and support.

Thank you all!

Now Central America may still be poor but I'm convinced that underneath the unstable boiling earth new seeds will grow and blossom soon.

May this piece of work contribute something to that process!

Bernd Schrikkema
Wageningen, NL

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1 INTRODUCTION

After a period of considerable drought a terrible hurricane classified 5 hit Central American Countries from the 26th of October 1998 until the 1st of November 1998. Countries most severely affected were Nicaragua and Honduras. Furthermore some parts of Guatemala and El Salvador were also severely damaged. The result was thousands dead and wounded, ten thousands homeless, an even bigger number of victims directly affected by the storm. Apart from that, large parts of the infrastructure were washed away. (see table 2)

ECHO responded immediately after the event. The 4th of November the European Commission allocated 6.8 M.ECU in a so-called First Decision (ECHO/TPS/210/1998/12000). This money was basically used for first line emergency aid like food, blankets and medical help. One month later, the 21st of December 1998 a second Decision was taken which provided for another 9.5 M.ECU (ECHO/TPS/210/1998/15000). This second aid package enabled the humanitarian organisations to continue to provide support to the victims in health, water & sanitation and temporary shelter. This emergency aid included more structured rehabilitation and economic reconstruction aid from other budget sources (Bilateral funds etc).

Almost one year later, in October 1999, the European Commission adopted a new Global Humanitarian Aid Plan worth 16 M.ECU (ECHO/TPS/210/1999/06000). This had to be directed to the most vulnerable people in Honduras, Nicaragua, El Salvador and Guatemala. Main sectors of intervention were rehabilitation of housing, water and sanitation and health.

As foreseen in the Global Plan an evaluation of the Mitch ECHO-EU intervention has been planned. The fieldwork of evaluation of which this report presents its results has been carried out between the 18th of January and the 20th of February 2001 in Central America. Briefing at ECHO headquarters in Brussels took place on the 9th of January. Debriefing and presentation of the results in Brussels was carried out from the 5th until the 6th of April 2001.

2 OBJECTIVES

This sector evaluation report is part of an overall evaluation of ECHO funded projects during the post Mitch period. This report focuses especially on housing, rehabilitation and infrastructure and covers the issue of linking emergency aid to long-term development. Other sectors like water and sanitation and health will be separately reported on. Apart from these 3 sector reports an overall synthesis report has been drafted which summarises the main conclusions of all three sectors.

This report evaluates the performance of ECHO in the rehabilitation sector for the period post-Mitch until August 2000 when the last projects financed by ECHO closed.

According to the Terms of Reference (see annex 1), the purpose and objectives are following:

1- Assessing the suitability of the Global Plans and the level at which the programmes have been implemented;
2- Assess the impact of the Global Plan in terms of output;
3- Assess the degree to which the objectives of the programme have been achieved and the effectiveness of the means employed;
4- Assess the role of ECHO in the decision-making process as well as in other activities for which the Commission services are responsible;
5- Analyse the link between emergency, rehabilitation and development and the link between strictly humanitarian and DIPECHO actions in the region;
6- Formulate an exit strategy of ECHO from the region, future ECHO funding which is deemed necessary and ECHO activities which could be handed over to PRRAC.

During the briefing in Brussels dd. 09.01.01 (with the desk-officers of ECHO 3 responsible for Central America) when reviewing the purpose of the evaluation mission emphasis was placed on point 2, 5 and 6. Especially the future role of ECHO in the region should be taken into account and assessed.

During the meeting it was also pointed out that the accent of the results should be geared towards 'learning' rather than 'accountability'. The emphasis is therefore placed on an analysis and assessment of ECHO policy rather than verification of all expenditures and related decisions.

3 RESTRICTIONS AND CONSTRAINTS

With respect to the scope and setting of this evaluation the following points should be taken into consideration:

- selection of visited projects by the Consultants has been carried out by ECHO;
- no preparation in terms of file investigation at ECHO-Headquarters could take place prior to departure to Central America. Upon arrival in Managua (one day later than planned because of a missed plane connection to Managua) there was no possibility to do a file research at the Delegation Office in Managua either because of the emergency situation after the earthquake in El Salvador.

4 METHODOLOGY

This evaluation mission has up to a high degree been prepared and planned by ECHO in the field. Logistical problems usually encountered during this type of work could therefore be avoided. Transport to project locations was facilitated by ECHO's implementing partner NGOs.
The evaluation has been focused on the project results and impacts of the work carried out by the implementing NGOs. However, it has not been the purpose of this evaluation to assess the performance of individual NGOs, which co-operated with ECHO during the post-Mitch period. Nevertheless it has been regarded as an effective way of assessment of the performance of ECHO itself by evaluating the project results of the implementing partners. For this reason direct references to

implementing NGOs have been avoided as much as possible although the projects can be traced back if needed.

Because of the earthquake in El Salvador, which occurred just before departure to Central America the planning and purpose of the field trip were slightly changed at the last moment. It meant that the team of evaluating Consultants were asked to carry out a rapid needs assessment on behalf of ECHO in the emergency zone and after that to carry on with the planned evaluation in the three remaining countries. This is why hardly any time was spent upon arrival at ECHO office EU-delegation in Managua and the team had to fly on to San Salvador. The needs assessment was reported on separately.

Three independent consultants carried out the complete evaluation, covering health and social aspect, water & sanitation and housing. The evaluation has been commissioned by ECHO Evaluation (former ECHO 5).

4.1 INTERVIEWS

In the field a topic guide was used during interviews with the representatives of the governments of different levels and member states, NGOs and 'beneficiaries'. Two different topic guides were produced, tested and used.

Field visits were always done in accompaniment with representatives of the NGO responsible for the implementation of the project. Furthermore usually also their local counterparts were present as well. In some cases apart from this a representative of the municipality would be present.
A project visit consisted usually of the following components:

- site inspection, environmental survey and risk assessment
- photo impression
- interview with adjacent outside persons (when available)
- interview with beneficiaries (with project staff usually passively attending) gathered in a group meeting
- interview with NGO staff responsible for the overall management of the project.

A complete list of persons met is presented in annex 2.

4.2 FIELD TRIP

The planning of the field trip has been changed shortly before arrival of the consultants in the region. This was due to the dramatic events of the 13th of January 2001 in El Salvador when a devastating earthquake struck the country.

Because of that the original objectives to assess the impacts of projects results funded by ECHO during the post-Mitch period in El Salvador were abandoned. Instead the team of consultants went to visit the region to do a needs assessment.

After finalising the work in El Salvador and the debriefing to Brussels the team started its originally planned tasks and travelled to Guatemala. In Guatemala a region in valley of the Rio Polochic of the departure of Altavera Paz was visited. No housing

projects or infrastructure works were funded although ECHO financed the construction of a small health post in a village settlement as part of a health project of a Spanish NGO called PTM.

It was only in Honduras where the consultants were confronted with the first housing/rehabilitation projects. In the north of Honduras we visited projects of Nueva Frontera and CISP, both Italian NGOs. After this the consultants travelled to the centre of the country and visited projects in vicinity of Comayagua implemented by Goal, an Irish NGO. On our way to Nicaragua from the capital city of Tegucigalpa before reaching the border the consultants visited two rehabilitation projects (housing project and rehab. of school) near the city of Choluteca implemented by a French NGO called Atlas Logistique.

Just across the border in Chinandega, Nicaragua housing and rehabilitation projects were visited of Solidaridad Internacional de España, the Spanish Red Cross and Terres des Hommes Italia.

After that a field trip was made to the mountain region of Nicaragua. We visited Jinandega, San Rafael del Norte, Esteli, Somoto, San Rafael de Limay. Only one big rehabilitation project financed by ECHO was carried out here by CARE International. Alas this project could not be visited because of a miscommunication between the ECHO field office and the NGO-desk. Documentation was gathered afterwards.

Two small rehabilitation projects near Masaya were also visited. These were the only two projects which were still being carried out during the evaluation. Those 2 projects were carried out by Terres des Hommes Italia and ASCUR España.

A detailed description of the field trip with dates, times, projects and persons visited is presented in annex 3.

All visited project sites and other locations of interest (especially public taps, drill holes and captations, schools and health posts) were fixed with a GPS reading (using a hand-held GPS Garmin 12). The exact location of all visited sites is presented in annex 5, table 10. Maps, showing all the project locations, are also presented in annex 5.

4.3 POINT OF REFERENCE FOR TECHNICAL EVALUATION

As point of reference it is thought useful to give a description of an ideal type of re-settlement in combination with the different categories of spatial environments where re-settlement took place. This is regarded necessary because a set of technical guidelines for technical evaluation of rehabilitation projects has so far not been found within ECHO.
The combination of a specific spatial environment with an ideal resettlement condition form a reference and starting point for an analysis of the aid ECHO financed in the period after the hurricane Mitch end of October 1998. The physical and spatial environment is thought to be important as they set the limits within social and technical solutions for rehabilitation should be found. A mountain area some 1500 m. above sea level demands more of a house than when a house is situated near the sea level, where temperatures are usually at night very mild all the year through.

In general the area visited for this evaluation could be diverted into 4 different regions. These different regions have been assessed and rated for some critical environmental parameters. The result is shown in table 1 below.

The different environmental regions encountered were:

-1 low-land flood plains in a wet tropical climate zone (Northern Honduras) (0-50 m.)
-2 low mountains in semi-arid climate zone (500-1000 m.) (Central Honduras Comayagua/Tegucigalpa)
-3 low-land flood plains in a semi-arid climate zone (Chinandega, Nicaragua and Choluteca South-West Honduras)
-4 mountain area in semi-arid climatic zone (500-1500 m.) (Central and North Nicaragua)

	1- Northern Honduras low-land flood plains in a wet tropical climate zone	2- Central Honduras low mountains/plain (alt:500-1000 m.) semi-arid	3- North-Eastern Nicaragua and South east Honduras	4- North-Central Nicaragua- Mountain area (500-1500m.), semi-arid
Earthquakes	+/-	+	+	+
Strong winds	-	+	+	+
Inundation risk by flooding of the watershed /river	+	-	+	-
Inundation risk of mud streams by rivers	-	+	+	+
Risks of Landslides	-	+/-	-	+
Tidal waves	+	-	-	-
Low temperatures at night	-	+	-	+
Termites	-	-	+/-	-
High concentrations of dust/dust storms	-	-	+	+/-
Water available in the surface sub-soil or from rivers	+	+/-	-	+

Table 1 Matrix which rates some critical environmental parameters of 4 different climatic zones in Central America and which are relevant for this evaluation

The ideal resettlement location is a place where:

- Risk of disaster is manageable and socially acceptable
- Potable water and energy sources for cooking are available all year round
- Access to suitable work exists and/or access to arable land for self-subsistence agriculture is available
- Access to civil services like health centres and schools exist
- Sufficient individual training, capacity building and community awareness building is provided for proper socialisation in the new community
- Distance to former living location is minimal.

If one of these basic conditions is completely lacking the resettlement project will fail sooner or later. Therefore it is of paramount importance that all project proposals, which seek funding, take these points into consideration.

With respect to the physical structures it is important to take into account the following aspects as kick-off point for construction of houses and a colony:

- Local climatic logical conditions; temperature/altitude range; winds; rains/ drainage;
- Natural hazards like resistance to earthquakes and or potential inundation;
- Local traditions and preferences of lay-out of plot and house: location of kitchen or cooking place, living/sleeping room, outside sitting-facilities, location of sanitary facilities, location of solid waste pit;
- Local materials which are traditionally used for house construction which helps to reduce costs, helps to give people to renew or extend the house easily without excessive costs and stimulate the local economy;
- Newly constructed houses should pose a minimal contrast to traditionally built houses;
- Short-term potential economic power of beneficiary in relation to maintenance costs of house and or community facilities (water/light/ cooking energy): it is no use to provide a house with relative high maintenance costs for people which will/can not pay for maintenance.

With respect to the selection of construction materials the following should be taken into account:

- Materials should have a minimal environmental impact; for example in Nicaragua it was observed that trees died and groundwater was rendered polluted because of use of highly toxic and persistent creosolated (Wolffman salts) wooden poles which slowly percolated into the underground.
- In other areas wood was being eaten by termites (fumicas). In these cases more durable materials (iron bars) had to be used.
- In areas where water is scarce rainwater catchment may economise drinking water consumption considerably. With respect to the use of galvanised roofs care should be taken not to drink water collected from these roofs for drinking water purposes. The zinc of the galvanised corrugated iron will slowly dissolve and end up in the water. Concentrations of zinc in water collected from galvanised roofs may rise up to 3000 mg/l. Use of other materials is recommended. Multi-layer galvanised coated corrugated iron with a red/Braun UV resistant paint.

With respect to the impact of presence of an NGO it should be taken into account that:

- Remote areas will respond better and more enthusiastic (in terms participation of beneficiaries) than those which are overrun by NGOs. Usually presence of NGOs makes the beneficiary dependent and encourages clientelism and diminishes private initiative.
- Satisfying needs of beneficiaries may induce new local inequalities between neighbouring dwellers. If someone has improved or fixed his house himself he is punished by the fact that his neighbour who has not developed any action gets the materials for free. In this way there is a direct link in discouragement of the beneficiary and increases inequality and injustice.

4.4 CONCEPTS OF SHELTER AND HOUSING

As point of reference with regard to different concepts of shelter and housing some of the most important concepts are briefly discussed below. The shelter/housing concepts encountered in the field were:

-1 Albergues and macro-albergues
-2 *Piso-techo* (translated: Ground & Roof)
-3 Complete house
-4 Improvised shelter

4.4.1 ALBERGUES AND MACRO-ALBERGUES

An albergue is a place where displaced people are brought together and being provided with a minimal form of (temporal) shelter. Shelters may differ in quality. In El Salvador the municipality of Tecaluca made an albergue by erecting a number of standposts and covering it with plactic black sheeting. This served a temporal shelter for all those who had lost their house in the earthquake of the 13th of January this year.

Later on so-called macro-albergues were visited constructed by among others OIM and the international Red Cross providing thousands of homeless of a temporal house (see photo 3). These houses were made in rows of prefabricated condominiums sheltering 50-100 families in parallel rows of one-room houses (sometimes one room had to be shared between 2 families). Washing, cooking and toilets were public and shared. Although the housing was meant to be temporal people had lived there since hurricane Mitch destroyed their houses. Living and social conditions were harsh and difficult, but it would provide a minimal shelter for thousands of people. Usually the temporal houses substituted tents which were provided just after the disaster struck. As more or less permanent solution large rehabilitation projects in the vicinity (but sometimes more than 30 minutes away (by bus)) were built to provide a permanent house for these people. In most cases the feasibility of these projects was questionable because general living conditions were so marginal that it would be very hard to survive under these circumstances.

4.4.2 PISO-TECHO

Piso-techo is a concept developed by ECHO and one of her NGO partners which can be defined as a minimal and durable skeleton of a house (see photo 4). It consists of:

i. A cemented floor (20 cm) with a ground surface of about 25 m^2
ii. 4 iron-reinforced concrete vertical beams
iii. A wooden roof frame
iv. Corrugated galvanised iron sheeting as roof
v. Glass-fibre reinforced plastic sheeting as provisional wall.

In order to maximise aid to as many beneficiaries as possible ECHO set a limit to the construction costs of a house. These are fixed to a maximum of 500 euro per house with a ground surface of 25 m^2.

The idea behind the *piso-techo* concept is that beneficiaries are provided with a durable skeleton of a house. With some self-help they are able to construct walls and inside separations(walls) by themselves. Also when they would have more money the *piso-techo* can be expanded with a veranda and or an extension to the house.

The general feeling among NGOs was that the concept can not be regarded as a dignified alternative for permanent shelter for beneficiaries. The opinion of the consultant is that the *piso-techo* is valuable and cost-effective alternative for a permanent house. It is earthquake resistant, and the roof cannot fall down in case of an earthquake and it can be converted into a relative comfortable house without much knowledge of construction. So as principle and starting point of a permanent house to *piso-techo* concept is regarded as feasible.

An important quality and safety remark should be made at this point. It was observed during inspection of some projects where the *piso-techo* was realised that the structures would not have roof stabilisation beams or reinforcements in the roof support frame in order to prevent horizontal and scissor movements of the roof and house. This is an important structural shortcoming of the construction which has to be corrected as soon as possible, according to the Consultant. Without this, the stability and resistance against strong winds is dangerously impaired and collapse can not be ruled out.

Photo 3 Impression of a typical macro-albergue near Tegucigalpa, Honduras

Photo 4 Example of *piso-techo* construction by ACSUR Las Segovias in Masaya, Nicaragua

4.4.3 COMPLETE HOUSES AND SETTLEMENTS

As result of the rehabilitation activities of implementing NGOs a wide range of different houses were constructed. Technically all houses were OK and all contained anti-seismic reinforced beams. Only few NGOs were able to construct a reasonable house with a minimum of costs close to the ECHO-maximum of 500 Euro per house. To some extent costs were related to external and environmental factors but mostly the costs were more related to the size and luxuriousness of the building.

Additional costs, which would go beyond the 500 Euro per house, would be paid from other resources. Visiting some projects sometimes more than a year since the first houses were finished it was striking that some houses had been transformed in villas (see photo 6). Obviously this was only observed in the most successful projects were beneficiaries obviously had been able to regain their lives successfully.

Extra money could be given in case the house would be provided with a latrine. In almost all cases the latrine was of the simplest type without ventilation. Sitting squats were not used although this is believed to be an excepted type of toilet and very cost effective. Instead latrines were provided with a kind of (sitting) bin with a removable lit. (Please read the sector report on water and sanitation).

Disposal of solid waste was collectively taken care of. In some cases people were not sufficiently motivated to dispose of their garbage in a responsible way.

4.4.4 IMPROVISED HOUSES

Although the response of the international community after Mitch was quick and effective it should not be forgotten that all efforts still remain a drop in the ocean relative to the extent of the disaster. Any form of aid did unfortunately not reach many people for whatever reason. These people had to rely on themselves. In all cases these examples were found in the rural areas. Within the framework of this evaluation some interest was given to observe the ways these people had survived and which solutions they had found to protect themselves against the elements. The types of shelter varied from a simple plastic sheet to sophisticated constructions of bundles of twigs and plastic sheeting. In the latter case the shelters were built illegally but apparently were tolerated as they had lived there since Mitch deprived them of their original homes. People worked as temporal labourers in the coffee industry.

4.4.5 INTEGRATION OF OTHER VITAL SERVICES

In some cases tasks for provision of related services other than housing or shelter were implemented by other NGOs or sometimes by governmental organisations. These services could be the provision of drinking water, the drainage system, the provision of latrines, landscaping for erosion protection. As planning and co-ordination of these related projects seldom was good it could be that people had moved into their new houses without the provision of related services among which lack of sufficient drinking water would be one of the most serious.

In other cases especially where water was scarce re-settlers sometimes were cut off from their water source without knowing why and when they would be reconnected.
Also it was observed that in some cases the physical planning and design of the house was not done according to local habits with respect to food-preparation, washing of clothes and hygiene habits. Early involvement of beneficiaries in the

design phase of the project and not merely as source of cheap labour could have avoided these problems.

Photo 5 Impression of improvised (illegal) shelters near the road Sebaco-Matagalpa

Photo 6 Poor and well-to-do after Mitch: Evolution of a housing project in Omoa, northern Honduras. The house in background has been upgraded and expanded after the housing project ceased operation. In the foreground a typical original ECHO house is shown (photo 29 Jan 2001).

5 RESULTS

5.1 DESCRIPTION OF GLOBAL PLAN

General situation before and after Mitch:
Between the 26th of November and the 1st of December 1998 a devastating hurricane swept over Central America. The countries most severely hit were Nicaragua and Honduras. ECLAC calculated the total losses as presented in table 2. The material losses were estimated at 6,000 Million US dollars.

Devastation Mitch	Numbers
Number of dead and/or remain missing	18,000
People injured	13,000
People left homeless	1,500,000
People directly affected	3,500,000

Table 2 Key characteristics of the devastation inflicted by hurricane “Mitch” (source: ECLAC)

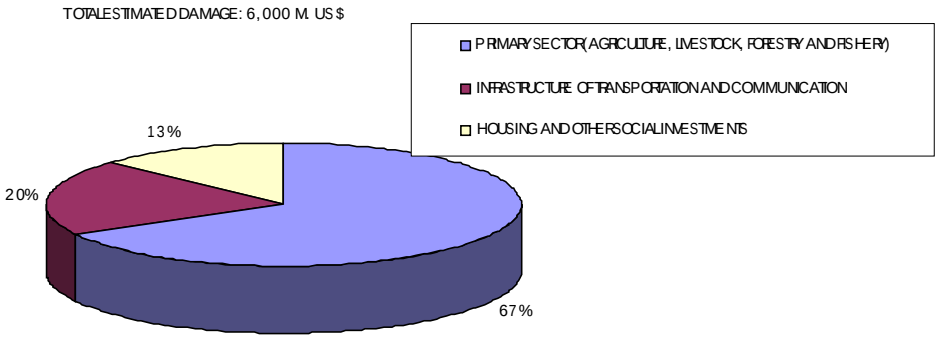

Figure 1 Partition of estimated damages caused by hurricane “Mitch” 1998 (source: ECLAC)

The region is prone to natural disasters. The zone is located on the ridge of moving tectonic plates which give rise to regular earthquakes and tidal waves. Furthermore the zone is known for its tropical storms of which Mitch was one of the most severe. Apart from that the zone had been hit by a long lasting dry period as side-effect of El Niño.

It is assumed that especially this drought has caused widespread forest fires, increased erosion, changed agricultural practices and set perfect preconditions for the next disaster to inflict maximum losses. So when Mitch struck the soils were dry and the natural capacity of the soils to absorb water was minimal. Man aggravated the prevailing conditions even further by its hunger for firewood for cooking and its common burning practices to burn down old grass after a growing season. It is believed that all these factors together contributed to the eventual impacts of the hurricane.
Mitch hit the region while it was slowly recuperating from a deep economic recession after decades of social instability, civil war and economic chaos. It is believed that Mitch swept developments back at least 20-30 years.

Note: Projects indicated with **+** were **visited** by ***this*** consultant The items between () were not financed by ECHO

	visited	**Housing**	**Latrines**	**Clinics**	**Schools**	**RWS**	**Roads**	**Health/ Social**

Nicaragua:								
Acción contre el Hambre Es	+					+		+
ACSUR Las Segovias Es	+	+	+			+		+
ADRA D.		+						+
Aide Médical Internationale F			+	+		+		+
Care F Int.		+	+			+	+	
Caritas/Mensen in Nood NL			+			+		+
CESVI It.		+	+	+		+		
CINS It.			+			+		
CISP Ni -HELP D			+			+		
Enfants du Monde/Drt. d. Hommes						+		+
German Agro Action (AAA)	+	+	+		+	+	+	
GVC It.						+		+
ICRC Ni.	+	(+)	(+)	+	(+)	(+)	(+)	+
INTERSOS It.		+				+		
Medicos del Mundo Es								+
Movimundo-Molisv It.	+					+		+
Solidaridad Internacional España	+	+	+			+		
Terre des Hommes Italia	+	+	+					

	visited	**Housing**	**Latrines**	**Clinics**	**Schools**	**RWS**	**Roads**	**Health/ Social**
Honduras								
ANNF Es.	+							+
APS/CISS It.			+			+		
ACF F.			+			+		+
ASB D								+
Atlas Logistique F.	+	+	+		+	+		
CINS It.	+	+	+			+		+
CISP It.			+			+		
COOPI It.						+		+
Enfants refugiés du Monde F								+
German Red Cross						+		
GOAL Ir.	+	+	+		+			
GTZ D.		+	+			+		
GVC It.								+
Handicap International B.								+
Malteser D.				+				+
MDM D.				+		+		+
MOVIMONDO It.								+
MPDL Es.			+			+		
Nuova Frontera It.	+	+	+			+		
OIKOS Pt.								+
PTM Es			+					
Solidaridad International Es.			+			+		
TROCAIRE Ir.			+			+		

	visited	**Housing**	**Latrines**	**Clinics**	**Schools**	**RWS**	**Roads**	**Health/ Social**
Guatemala								
Acción contre el Hambre Es.								+
CISP It.		+				+		
COOPI It.	+		+			+		
MOVIMONDO Molisv It.	+							+
OXFAM UK.		+	+					+
PTM Es.	+			+				+
MSF L.								+

Table 3 Overview of all NGOs which were involved in ECHO-funded projects. Projects are classified per sector or main activity. Projects which were actually visited by the consultant are also shown.

ECHO had been present in the region for some years when “Mitch” struck (since 1992). Aid was being channelled to the targeted population via (inter-)national NGOs according to ECHO’s Global Plans. The “Global Plan” is the general financial planning tool of ECHO through which it allocates its financial resources to emergency and rehabilitation projects in Central America. In table 3 an overview of all post-Mitch ECHO funded projects is presented. It was mainly due to the already existing aid infrastructure that ECHO was able to respond quickly and adequately. Needs were

assessed and existing projects (money not yet spent from the 1st Global Plan and DIPECHO) reoriented to cope with the most urgent necessities. In this respect about 10 million Euro could be made available directly for an emergency response by the 11 international NGOs and the German and Spanish Red Cross already present in the field.

A month later a second donation of 9.4 M. Euro was approved. The reallocated money and money of the 1st Decision were primarily used for emergency goods, like food, blankets and medication.

Soon after the first suffering was mitigated projects were formulated to rehabilitate damaged and/or completely destroyed infrastructure like schools, health clinics, water and sanitation systems and houses. These were primarily paid from the money of the 2nd Decision. Nearly a year later the second Global Plan was approved by the European Parliament and 16 M. Euro was made available for rehabilitation of dry and wet infrastructure and health. In table 4 an overview of allocated money in 1998 and 1999 is presented per receiving country. Total money spent: 36,743 M. Euro, including 2.1 M. Euro of reoriented running DIPECHO projects, 1.0 M. Euro from the ECHO reserve fund and 0.45 M. Euro from the regional EU-offices. In figure 2 this partition is graphically presented. In annex 4 a complete overview of all the ECHO-funded projects per NGO including funds, which entered the region via other EU- and/or bilateral EU-country programmes is presented.

	Total	**Honduras**	**Nicaragua**	**Guatemala**	**El Salvador**
	M.Euro	**M.Euro**	**M.Euro**	**M.Euro**	**M.Euro**
Global Plan (1st)	*4,375*	1,405	1,560	1,410	
DIPECHO (emergency reorientation)		Central America 2.1			
1st Decision "Mitch"(4-11-98)	*6,678*	2,175	2,853	0,750	0,900
2nd Decision "Mitch"(21-12-98)	*9,690*	5,075	3,200	1,015	0,400
3rd Decision "Mitch"(Oct. 1999: 2nd Global Plan)*	*12,450**)	6,550	3,200	1,650	1,050
	36,743	*15,205*	*10,813*	*4,825*	*2,350*
*)*Please note that the 2nd Global Plan was boasted with 2.1 M.Euro, 1M.Euro and 0.45 M.Euro from running reoriented projects, the ECHO-reserve fund and the regional EU offices, which adds up to 16 M.Euro*					

Table 4 Overview of '98 and '99 EU-expenditures with respect to Mitch (excluding the 3 M.Euro of reallocated project funds of on-going programmes financed by ECHO at the time Mitch struck the region) (source: ECHO)

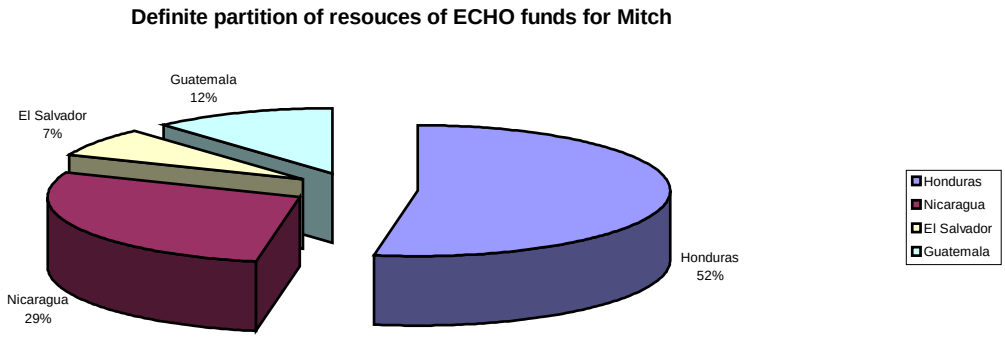

Figure 2 Partition (final) of 1998 ECHO-resources over the effected countries by hurricane "Mitch" of in total 36,743 M.Euro

Realised	number
New constructed houses	2,307
Rehabilitated houses	861
Culverts and gullies	25
Roads (km)	58
Schools	30
Invested in rehabilitation-sector 1st & 2nd decision (M.Euro)	3,921

Table 5 Consolidated results for Honduras (ECHO summary Honduras dd. 27th of Jan 2001)

Based on the consolidated results presented in table 5 it is possible to make a worst-case estimate of the (maximum) money spent per house. This estimate is based on the presumption that other (financed) activities can be neglected money-wise as the costs of the total constructed houses is high relative to the costs of the other activities. If one divides the total money spent by the number of houses, the maximum cost per house comes down to 1200-1700 Euro per house. Within the timeframe of this evaluation these estimates could not be calculated for Nicaragua and Guatemala.

Other financial aid for the region:
Apart from the ECHO emergency aid, the European Commission had approved for 8 M. Euro for tools and seeds and approved for another 16 M. Euro of grants for agricultural rehabilitation (5 M. Euro Honduras, 5 M. Euro Nicaragua, 6 M. Euro via EuroAID (see also annex 4, tables 7, 8 and 9)).

The Commission of DGIB presented in May 1998 a development aid proposal for Central America, worth 250 M. Euro. This programme has become known as PRRAC, Programa Regional para la Reconstrucción de America Central. Within this programme some budget has been reserved for debt relief. This year the PRRAC has started operating in Honduras and Nicaragua.

International Community:
Via the IDB Consultative Group for Reconstruction and Transformation of Central America 6,300 M. US$ was allocated to Nicaragua and Honduras. Later this sum was substantially expanded to 9,000 M. US$. Of this sum 3,700 M.US$ will come as bilateral aid. The remaining 5,300 M.US$ will be channelled via the World Bank and the IDB particularly for Nicaragua and Honduras.

Apart from these initiatives also renewed arrangements were made with respect to debt payments.

5.2 IMPACT

DEFINITION
Impact should be defined as all consequences, which stem from the fact that houses were constructed and victims re-allocated to their new homes. Along the guidelines set out in the Terms of Reference (see annex 1) various aspects can be distinguished, being physical impact as reduction to human suffering including health issues, environmental issues, social impacts including dependency issues on aid, economical issues including income consequences and access to work, impact on local capacity building issues and gender impacts. Finally, the impact on preparation, mitigation and prevention of possible future catastrophes can be assessed.

CONTRIBUTION TO THE REDUCTION OF HUMAN SUFFERING
In general and which should be regarded as a positive impact, is that most beneficiaries received a house within a 6 months period after the project started. Furthermore beneficiaries received a land title, which makes the land on which the house is built their property. Also it should be taken into account as positive impact that houses represent an intrinsic value, which to some extent may be valued as a boast to the beneficiary's purchasing power.

ENVIRONMENTAL IMPACT
Victims of the hurricane Mitch all lived in high risk regions. The resettlement areas were selected in such a way that risk of landslides, inundation and mud streams were minimised to acceptable proportions. However in most cases resettlements were situated on marginalised land. This meant that subsistence farming was ruled out because of lack of either sufficient area, quality of the soil or water, or both. In some cases the ground was so completely barren that firewood could only be imported from elsewhere as in the vicinity no trees or shrubs could be seen. This would imply buying power, which did not exist and would not be very likely to develop in the near future. In places were firewood could be found at reasonable distance this would imply a serious danger to the fragile existing ecosystem. Deforestation and erosion could easily be stimulated.

Other problems, which went hand in hand with the existence of resettlement colonies, are that most people were and are not used to live in a close community. Therefore in cases where no social integration programme was set up a great number of urban social problems was encountered, like domestic violence against women and children, alcohol abuse, prostitution, youth-gang formation and related violence and extortion practices.

SOCIAL IMPACTS

Positive as well as negative social impacts were observed. Usually resettled victims came from different social backgrounds and all belonged to the poorest classes of society. The different social groups, which could be identified, were: landless farmers and day labourers with their families. Farmers including their families with land titles and some heads of cattle. Families from semi/peri urban areas who made a living out of providing all sorts of services, single mothers with small children, single old people.

In some cases (resettlements in Omoa, northern Honduras) the Mitch disaster brought people together and triggered a process of community building while constructing the houses and related infrastructure. This did not only provide them with a roof, but maybe even more important, provided them with hope and a new future and increased the people's self-confidence considerably. Striking was that although people had built their houses completely by themselves, these communities showed a genuine gratitude towards the implementing NGO Nueva Frontera. This project was carried out with emphasis on community participation from the very beginning up till the end. It also was observed that the community leadership and municipality support was good and consistent and would probably have attributed greatly to the success of the project.

In other projects community participation was incorporated as well, however the impact on the consolidation of the socialisation process among the beneficiaries was much smaller or lacking. Factors, which may have played a role, are the way the community participation was set up, the strength of local community leadership, interest of the municipality and the availability of other NGOs in the region. It was observed that the best accessible regions had the highest concentration of different NGO projects and had a rather passive response from the beneficiaries. On the other hand, in remote rural areas, difficult to access from outside, community participation was high.

In most projects the economic position of the beneficiaries decreased by having more difficulty to find access to work relative to the situation before Mitch. This obviously had a strong social impact. Survival strategies of families were sending one of more family members away to look for work elsewhere (generally Costa Rica or northern Honduras). People would come home every week, month or whenever they had money. Within the existing social context it is difficult to assess to what extent this aggravated the problems of the remaining family members being mostly young women with children. Other strategies were to leave the house and life temporarily with friends or extended family members in or near the city in order to find work. In some cases people decided to go elsewhere permanently and dismantled their new houses and sold the valuable parts (corrugated galvanised iron roof sheeting). Some people took the ordeal of walking long distances daily to come to fields where they could work as temporary labourer. All interviewed people were happy with their houses but looked towards the future with great sorrow and regarded their lives after Mitch more difficult and harder than before.

Social problems related to living in small new settlements were among others the use of latrines and disposal of solid waste. Especially people which used to live in remote

rural areas never had used a latrine before nor were used to dig a hole to get rid of their solid waste. In some rehabilitation projects these aspects were addressed.

Another important aspect related to maintaining a house is the need to save money or other valuables in order to be able to pay for minimal maintenance expenses. For all projects visited this aspect, not only for the house but also for the water system or health service, implied big social problems: People are not used to think in this way, there is a gender barrier between the needs and priorities of a man as head of the household and the needs perceived by the woman, and there is a general lack of everything which makes saving a very difficult matter.

Big resettlement projects which were visited -which served as reference for this evaluation and in which relative little attention was given to community building- it was observed that all negative aspects related to getto-forming were present. Alcoholism and drugs abuse, sexual abuse of women and children, robbery and extortion. Also living conditions were extremely marginalised.

TECHNICAL IMPACTS

In all cases houses were constructed well and durable. Only in one case a minor defect was observed. This was in relation to the *piso-techo* construction. Roof stabilisation beams or any other form of roof stabilisation was absent. This point was recognised by the implementing NGO and would be corrected as soon as possible.

It should be said that roof stabilisation would not be necessary in case a *piso-techo* structure would be transformed into a complete house as the (outside) walls of the house would provide sufficient stabilisation of its own. Nevertheless in many cases the *piso-techo* structure would be left as it was. Therefore roof stabilisation should have been provided in all cases.

Also it was observed that nails were used instead of bolts and screws. The latter also provides more stability and should have been used instead of nails (which are more easily employed than bolts).

No proof was presented on quality control of materials used and timing of casting. Especially the quality of sand, cement and gravel for cast-concrete structures as for example the vertical beams are a crucial factor in the quality of the concrete. Before casting the mixture of concrete and after casting (curing of concrete) should be assessed and monitored by an expert representing the supervising party (NGO) especially for bigger infrastructure, like health centres and school buildings. No proof of any sort could be presented. Stricter guidelines for the NGO are recommendable.

DEPENDENCY ON HUMANITARIAN AID

Dependency on aid is something, which is hard to assess at this moment. The consultant's impression is that about 50% of the projects visited will require some sort of continuous support because the location of the resettlement is so badly chosen. This means that only with sufficient capacity building in learning to deal with the harsh living conditions long-term viability may be expected. If not the resettlement project will probably die a slow death. Which means that people will look elsewhere to find a place to live in an improvised way near places where they find access to work, and most likely near bigger urban centres.

It remains difficult to say to what extent the observed problems are solely a consequence of the intervention. The general situation in the country after Mitch has significantly deteriorated. Therefore it is likely that part of the observed problems are related to the general difficult economic situation in the region. However, the fact that an intervention was carried out, makes the intervening partner to some extent responsible for the living conditions in the resettlements it intervened.

5.3 RELEVANCE

Relevance of ECHO interventions should be evaluated against the objectives it pursues. (ref. Global Plan 1999, the Council Regulation 1257/96 and Manual for the Evaluation of Humanitarian Aid). The main objective of the ECHO mission is to alleviate human suffering caused by natural disasters and mitigate its impacts. Parameters to measure the relevance are following:

- Response speed: How fast can ECHO funds be made operational after an event: The faster ECHO can respond to any event the higher its relevance.
- Coverage and targeting victims: How does ECHO make an adequate selection of beneficiaries? To which extent are physical constraints like inaccessibility of the terrain causing problems?
- Partition of resources geographically: How does ECHO ensure a just and equal partition of aid so to prevent that one region gets all attention and others get nothing?
- Partition of resources socio-culturally including gender aspects: Does ECHO funding take potential cultural inequalities sufficiently into account, so that aid is focused on key-beneficiaries which ensures just partition and use of the aid provided? This holds especially true for gender related differences.
- Relevance is also important with respect to the longer-term impact of an intervention. This is especially important if permanent solutions are being sought.

Response time of ECHO seems satisfactory. However it should be said that this is not a virtue of ECHO but merely of the NGOs which can rely on their own funds during the time between having received a verbal confirmation of ECHO-support after a disaster, and the actual physical transfer of the money. For most NGOs this way of working is okay. However for smaller NGOs, especially national NGOs who normally have less excess and availability of own resources, this seriously hampers their potential response time, as they cannot start before physical transfer of resources is effectuated. This situation has been observed in all countries visited.

Coverage and targeted victims: Selection of interventions funded by ECHO is carried out by NGOs in the field in close co-operation with the local authorities. Directly after Mitch there appeared to have been considerable problems in the aid co-ordination. However, in all countries an effort has been made in disaster preparedness. In El Salvador after the first earthquake, the 13th of January 2001, this has shown a positive effect although in the first moments after the event some chaos could not be avoided. In cases where there is no NGO presence need assessment is much more difficult and response is usually slower and less effective.

Beyond the direct boundaries of the co-ordinating municipalities, geographical coverage will remain to be a serious problem by lack of information about the needs according to government officials and NGO representatives. It appears that especially rural areas which are difficult to access and where potential victims live isolated it will remain to be a problem. This problem has been demonstrated again after the earthquake in El Salvador where the actual damage in the rural areas two weeks after the event was still hard to assess.

It has been observed that victims do not represent a homogenous group. Victims may come from different social and geographical backgrounds and representing different needs. For example small farmers valued aid to reclaim their lost land much higher than getting a house. On the other hand small merchants, for example women (re)selling commodities or/and providing certain services valued a house of their own much more even if it was far away from places they used to work before.

Gender related issues of the relevance of the rehabilitation projects are discussed in a separate paragraph. In general NGOs were well aware of gender related aspects of their intervention. Usually women were selected as owner of a house, in some cases the property rights were equally divided between man and wife. In general women valued a house more than men.

5.4 CO-ORDINATION AND COHERENCE

In order to achieve better performance tuning between different interventions of NGOs and/or governmental agencies is of utmost importance. In this respect two factors should be analysed: First of all the co-ordination between partners during execution of the project and secondly hand-over and continuation aspects after the project had ended. Also the role of other EU-donors should be taken into account like the role of DIPECHO and PRRAC.

All projects reviewed showed some sort of co-operation with the local authorities (co-operation/coherence). Furthermore, some of the visited projects were implemented by more than one NGO (complementary action). It happened that one NGO could be responsible for construction of the houses while other had taken on the task of constructing latrines or doing community building work. Most of the time the municipalities had a co-ordinating task in allocating a specific NGO to a certain area. In this way aid could be more or less equally distributed.

As stated above municipalities should take a bigger effort in selecting proper land to victims, as is the case now. Also a municipality should be given more (commercial) interest and responsibility in the allocation of victims within their municipal boundaries, participatory training in strengths/weaknesses/opportunities and threats (SWOT) analyses between the municipality and the NGO should be stimulated. On the other hand, donors and NGOs should lobby and pressing for the best alternatives within and/or between different municipalities in finding proper land for resettlement of victims. From the donor side more reconciliation and patience should be expected. It has been observed that this aspect is completely lacking from the donor side.

Becoming a more active stakeholder in this negotiation process could also facilitate a more relaxed choice of a resettlement location.

In co-ordinating complementary actions of NGOs it appeared often difficult to work and plan together. Therefore houses were sometimes ready while the first latrine had yet to be constructed. Doubling activities in the same area by different NGOs with or without ECHO funding were not found, however in acute emergency situations this seems to be a common phenomenon. The fact that this was not observed is probably because rehab projects are usually starting some time after the most important needs are met and better co-ordination by the local authorities is in place.

5.5 EFFECTIVENESS

The effectiveness of interventions is defined as the weighed sum of the effectiveness of individual ECHO projects in the region. Parameters to measure the effectiveness of an individual project are the following:

- To what extent did the targeted population receive a roof
- To what extent did people other than the targeted population benefit from the intervention
- To what extent does the provided shelter or house satisfy existential basic needs.

In general projects visited provided housing to the targeted population within the project period. In this respect the shelter problem for the targeted population can be regarded as solved.

From interviews with NGO project staff, municipalities and beneficiaries it can be concluded that in all cases aid was channelled effectively only and exclusively to the targeted population. Therefore chances of actual abuse of aid in this respect can be ruled out.

Housing and shelter is alas only one of the many components for diminishing the vulnerability of the targeted population. Other aspects are related to the social-economic context of their situation. It is possible that by providing shelter the vulnerability of the targeted population increases, because other components determining the overall long-term vulnerability become more important. Two factors were identified as important: The first one is access to work and/or the availability of arable land, second one is availability and durability of other related services like water and sanitation, firewood for cooking and to a lesser extent primary health care services, light for social security, education and community awareness building and disaster preparedness.

In case the targeted population lacks one or more of the above mentioned components it is well possible that the general health conditions, including social disintegration and therewith its vulnerability, increases despite the fact that good housing has been provided. Health statistics may indicate differences between the relocated populations in relation to other groups in the vicinity. Indicators are incidence of diarrhoea among small children, incidence of cough and or eye infections (dust), malnutrition indicators like biometric indicators (height over age, weight over length and weight over age) for small children. From the visited

communities no acute malnutrition among young children has been observed but this may be camouflaged by the season when this assessment was carried out.

5.6 COST-EFFECTIVENESS

Cost-effectiveness in relation to the rehabilitation sector can be defined as to which costs a minimal shelter per beneficiary can be realised. A minimal shelter should be defined according to the stage of the emergency. Directly after an emergency situation plastic sheeting, possibly including poles, rope and tape, are sufficient to provide a minimal protection against the elements. In an post-emergency phase more durable solutions for shelter should be considered. What under these conditions can be considered as minimal is depending on the natural environment and the concentration of people which needs to helped. Besides, the long-term objective of providing shelter is also important: In case housing has to provided for a relative short period, merely as a transitional state towards permanent housing the minimal requirements for shelter can be less than when permanent housing is to be considered.

The objective of all of ECHO-funded rehabilitation projects was to provide permanent housing to the beneficiaries. The minimal standards for permanent housing and shelter are to provide a stable roof and a solid floor. This has let to the *piso-techo* concept (see paragraph 4.4.2). In principle, this concept provides a beneficiary with a skeleton of a house which gives a minimal protection against the elements and he/she can transform into a reasonable house with local know-how and materials.

Cost-effectiveness should take account of regional differences and demands. In principle it should be possible to make a cost-comparison between different projects using different housing concepts. For some projects number of beneficiaries were well estimated an
d a ratio between money spent per beneficiary could be calculated and compared with other projects.
In table 6 an example is given of a comparison between costs per beneficiary for some projects ECHO funded in Honduras. The money spent per beneficiary is more or less equal. For Nicaragua and Guatemala this analysis could not be carried out because of time constraints.

For all projects visited it should be said that ECHO usually was one of the donors involved. Usually ECHO was the first donor involved. At a later stage the project could be financed and continued by other donors. The cost of a house was usually much higher than the money invested by ECHO alone. It is thought that this is a crucial aspect of the effectiveness and eventual success or failure of the overall project.

Country	NGO	Nat	Region	Euro/Ben
Honduras	Atlas	F	Choluteca	427
Honduras	CINS	I	Fransisco morazan- colon - isla	633
Honduras	GOAL	IR	Rehab	723

Table 6 Example of Ratio money spent per beneficiary for 4 projects in the rehabilitation sector

5.7 EFFICIENCY

The following indicators can measure efficiency:

- How fast after the initial plan to provide shelter the targeted population could be given a house?
- Which factors influenced the process of survey/inventory, land & site selection, building the houses and related infrastructure adversely?
- Do the construction costs of houses reflect to some extent market prices of building materials, skilled labour, and transport?
- Do the constructed houses present an overkill of minimal requirements which may adversely has effected both completion time and costs?
- Does the NGO apply a cost-effectiveness screening on all its activities for example by maintaining a database of suppliers of costs per unit product or service?
- Can the NGO present proof of using an open, public and transparent bidding procedure for infra-structural works, which it supervised?
- Does it provide for ways to evaluate the performance of contractors etc?
- Can the NGO provide some sort of proof of exchange of performance of contractors and suppliers between other NGOs working in the same country under similar conditions?

The time frames in which rehabilitation projects had to be finalised were tight: 6 months was usually the maximum. ECHO could extend this period for some months but in general NGOs tried to finalise the project within 6 months. In almost all cases NGOs despite the fact they had little experience in the rehabilitation sector were able to implement the project successfully. Usually they used professional contractors and mobilised the beneficiaries as labourers. Overall supervision was carried out by the NGO. In general the efficiency for realisation of the project objectives was high.

Site-selection was usually done in close co-operation with the local authorities. Not in all cases the local authorities were very co-operative. In these case NGOs were forced to accept marginal grounds and sometimes would loose valuable time. (example: CINS, Trujillo, dept. Cólon, Northern Honduras)

It has been impossible to assess to which extent market prices were paid for the construction materials used. One effect which has been reported from several independent sources is that the presence of NGOs and the relative scarcity of almost everything after Mitch let prices go up. No reports of loss of materials as result of robbery or similar things were encountered. No financial analysis of rehabilitation projects has been carried out within the framework of this evaluation. This would cost an enormous effort.
What however should be demanded in future projects is that NGOs would be provided with more clear guidelines on how to control cost-effectiveness and efficiency themselves.

A database of prices of construction materials for example should be maintained and comparative indexes and indicators per project should be calculated on a regular bases giving insight in costs per m^3 or costs per m^2 for example as part of the donor

reporting (please see Care France Nicaragua report as good example). This should closely correspond to the way the budget lines are defined.

Also proof of a transparent and open selection procedure for a contractor was not presented or shown in the files. More clear guidelines from the side of the donor are recommended in this case. The principle should be auto-control by the NGO rather than control by the donor. Also within the philosophy of the 'partnership' between NGO and donor this principle of auto-control fits in well.

5.8 VIABILITY

Viability is a parameter, which describes the feasibility of the project in the long term.

About half of the projects visited the viability is questionable. The most important reason for this is the poor site-selection for the resettlement. Often it was found that lack of interest and active involvement on part of the local authorities was an important factor in this. On the other hand, the spending pressure of the NGO also contributed to the fact that little time could be lost on where to start with the construction of the houses. In these cases the viability of the project was seriously being compromised. A final conclusion on this matter can only be drawn after involvement of the NGO has stopped and people are left on their own for let us say two years.

In one case the viability of the project was questioned not because of the barrenness of the location but because of the potential risk for renewed inundation (Omoa, Northern Honduras). The resettlement was built on a location where people (outside the resettlement) testified that during Mitch the location was covered with 2.5 m of water. This is not a very fortunate prospect for all those happy house owners. Although traditionally people had built wooden houses on poles and some concrete houses on poles were found in the vicinity the NGO and contractor had not taken this option into account. When this issue was raised in the group discussion with beneficiaries they contested that they would rather live in a "normal" house facing inundation rather than living in a house on poles. An astonishing outcome! According to the Consultant the NGO and donor should have given more attention to this aspect and either should have rejected the site or should have considered a different type of house.

5.9 VISIBILITY

Visibility is the way and the extent to which the name of the donor (ECHO) had been promoted and made visible.

At all projects visited the name of ECHO was clearly visible and systematically promoted by means of its logo on all structures. Among the beneficiaries it also was clear that the resources for realisation of their houses, latrines, water systems, health clinics or school buildings came from ECHO. ECHO was also related without fail to the European Union.

Apart from the ECHO-logo presence of ECHO was visualised by means of big announcement boards along the road usually indicating the presence of an ECHO project.

A negative point in the ECHO visibility was that ECHO was not mentioned in at least one recently published article about the PRRAC programme in the national newspaper in Honduras. DIPECHO was quoted once but ECHO was not mentioned at all.

5.10 GENDER ISSUES

It has been observed that the rehabilitation projects did have significant effects on husband-wife relationships.

Property issues:
Among the most vulnerable were women without an official husband and with young children. In some cases a man lived with a woman without any legal status. In most cases the ownership of the house was given to the woman. But in some cases the ownership of the house would be divided equally among husband and wife. In case of doubt the ownership would be passed to the woman.

Power differences between traditional man and woman relationships are rather big. The man is head of household and decides without much discussion with this counterpart how the scarce financial resources are being allocated. Interviewed women (temporarily separated from their husband) would testify that they would save money for maintenance of their water systems, health of the children or for small reparation of the house if they would be in control of the financial management of the household but under the current circumstances they did not dare or want to raise the issue with their husbands.

In general women valued a solid house more than men. This depended much on the fact if the men were agriculturists or were landless labourers or thriving some sort of trade. In the former case they would prefer to have received a piece of arable land rather than a house.

People who never had been living in some sort of close community and who were forced to live in a settlement usually had all kinds of social adaptation problems. As result of a social awareness programme for women in one of the rehabilitation projects it showed that domestic violence turned out to be a major problem for many women in this community. It would be interesting to investigate to which extent domestic violence is related to rehabilitation of people.

6 CONCLUSIONS

6.1 RECOMMENDATIONS

TECHNICAL

1- Standardisation of construction of houses should be promoted. In this respect the *piso-techo* is a valuable concept, which is believed to provide a minimal and cost-effective solution to suffering lack of shelter. The concept has to be tailored to individual demands like the family size and natural circumstances like living high in the mountains or at sea level. It has been observed that the *piso-techo* concept provides a starting point for making a complete and durable house for beneficiaries. However for vulnerable groups like women with children more assistance is needed to complete the house as they do not have the means and knowledge to complete the house themselves. Individual guiding on part of the NGO therefore remains necessary.

2- *Piso-techo* should be provided with roof stabilisation reinforcements to be sufficiently stable against strong winds. At this moment the structure lacked any form of roof stabilisation thinking that owners would start erecting stabilising walls directly after finalisation of erecting the *piso-techo* structure by the NGO. It was observed that this was seldom the case and that thus the structure was left rather unstable with a serious danger of collapse with the first storm to come.

3- The *piso-techo* structure was nailed together rather than using screws and bolds. The latter increases stability of the structure and thus its security significantly as well. Nails tend to 'work' themselves out of the wood when joints are 'working' under slight movement (triggered by winds or earthquakes etc).

4- House-concepts should be evaluated against the natural conditions in which they are built. In areas with high dust concentration plots and or houses should provide better protection against this. In high mountain areas houses need to be closed to protect against the cold at night. In a lowland area traditional houses were built on poles to keep dry feet in case of inundation. However this concept was not copied by the implementing NGO because people did not accept to live in houses on poles and because it would make the house much more expensive. In the consultant's opinion it is the responsibility of the funding agency to take a stronger position against this. It is the consultant's opinion that ECHO should take a leading role in building secure housing even if this would mean using new (or old, in this case) concepts.

5- Houses should be constructed with participation of the end-users, especially women. Layout of houses sometimes did not take into account local traditions with respect to cooking, washing and use of toilets etc. If women had been consulted in the planning and design phase of their houses these mistakes could have been avoided.

6- Construction of houses was usually contracted out to local contractors. From the daily reports of the NGOs no proof could be presented of (written) approval of used materials like sand, gravel and cement for the construction of vital cast-concrete elements. Nor was there any proof of presence of supervisors of the NGO during casting of concrete during the construction phase. It is believed that lack of knowledge and skilled staff on the side of the NGO is responsible for the poor technical supervision of the works. From the side of ECHO stricter guidelines for construction of cast-concrete structure are therefore recommended.

7- Beneficiary participation in the construction of their houses is a concept that has shown considerable success and it is therefore strongly recommended to continue to use this concept.

PLANNING

8- Selection mechanisms for identification of beneficiaries seems to work satisfactorily. In the current set-up both the implementing NGO as well as the local authority perform a survey in which they independently from each other make a selection of beneficiaries. In this way nepotism is avoided as much as possible and an honest selection of beneficiaries is guaranteed.

9- In the assessment of needs of beneficiaries lack of shelter is a very obvious need. However it is recommended to evaluate the value of provision of shelter against other needs. Of these other needs the most important is that of food security and/or work. Provision of and or possibility to find work or to cultivate the land to provide food is regarded just as important as shelter, however this vital aspect has not been identified by ECHO as a need. It is the opinion of the consultant that if this aspect would have been given just as much priority as shelter, most of the failures in resettlement projects could have been avoided. In this respect it should also be taken into account that the western value of a house is of a complete different order as it is for a rural or urban poor in Nicaragua or Honduras. Losing your house is bad luck but losing the soil to grow your food or to lose your work may be even worse. It should be kept in mind that a provisional shelter can be made from local materials within a day.

10- Land and land-titles for resettlement have been often difficult to obtain. Sometimes this led to project delay. Sometimes land-titles could not be given officially but some sort of document was given to the house-owner stating that he had lived at this particular piece of land for many years and because of that was given permission (by the local authorities) to construct a house on that piece of land. Most of the times projects were located at marginal grounds which make survival next to impossible. Costs of acquisition of land were never paid by ECHO. Funds were usually coming both from the NGO's own resources and sometimes from the local authority or both. Prices of land (even the most useless pieces of land) would usually go up. As acquisition of land is such a crucial success factor of a rehabilitation project it is recommended that ECHO and or the representatives of the European Commission should make much more effort at national, regional and local level to bargain more favourable conditions for the acquisition of useful land for new resettlements. This element should be taken on board in the negotiations on for example debt relief etc. More and better negotiation training on the side of the EU may be necessary.

11- Feasibility of housing projects is very much depending of local conditions. The projects which have proved to be the most viable were those where people could rebuild their house on the same spot as where they used to live before. These projects triggered no social problems. On the other hand, if people needed to be resettled the success of the project was very much depending on the location where people were relocated. In all cases where the local municipality had shown a genuine and active interest in solving the problems, very satisfactory results could be seen. It is therefore

recommended that in future -as site-location and selection of rehabilitation is such a crucial factor in the success or failure of a housing project- both from the side of ECHO as from the side of the NGO maximum negotiating power and institutional reinforcement of the local authorities is considered before deciding a go or no-go with respect to building a new resettlement. As the decision of where to start a resettlement project is so crucial stronger supervision by means of independent assessment by ECHO with written approval of the side of ECHO is recommended.

12- The ECHO project running time of 6 months for rehabilitation projects is small. Running time of rehabilitation projects should become minimally 18 months according to discussions with implementing NGOs. The spending pressure of the NGO on one side and the sometimes complete indifference on the side of local authorities to take responsibilities for their refugees results in often very poor site selection for rehabilitation projects. These projects may do in the end more harm than good.

13- It is believed that the complexity of rehabilitation projects is much underestimated by the donor. In that respect it is recommended that cross-breeding sessions between the implementing NGOs, local authorities and donors are organised on a regular basis to learn from experiences elsewhere and to develop a more professional approach towards these complex programmes.

14- Performing a cost-effectiveness analysis over the different projects has proven to be very difficult. Local conditions are difficult to compare with each other etc. Still both for the NGO as for the donor analysis of cost-effectivity is very useful. The current financial monitoring tools of setting off the expenditures against the planned budgetlines is a first and minimal step. However it is recommended especially for infrastructural projects to incorporate more auto-control mechanisms. For example setting up material balances on the amount of materials used per house and the total amount of materials bought and making someone responsible for this. Making reports on materials in stock in the warehouses and materials going in and out etc. Again the lack of experience on the side of the NGO with the implementation and supervision is regarded as one of the biggest bottlenecks.

15- Linking emergency to development, and co-operation between donors, NGOs and local authorities: These two themes in relation to the rehabilitation sector are not specific for Central America or Mitch. It may be more productive to organise a seminar to bring different project experiences in this sector in the limelight and to work out institutional alternatives for improvements.

16- Recent developments in El Salvador mean that phasing out of ECHO in the region (meaning the whole of Central America) is not viable. The region is and will continue to be prone to natural disasters. It is essential for ECHO to realise that presence in the region is and will continue to be needed in future.

17- In times of relative calm projects which were started during an emergency phase and which need long-term attention -like the economical, social and ecological consolidation of (new) resettlements sites and O&M of water & sanitation projects- should get priority in receiving prolonged funding from development oriented EU-services like IBDG and DGVIII. This again

stresses the need for more intensive co-operation between different units of the EU.

18- ECHO should become more flexible in expanding and reducing its emergency programme management team proportional to (new) emergency situations. In terms of human resources management a pool of experts, a kind of rapid deployment task force from the development services and/or from NGOs present in the field should be formed to assist in ECHO-emergency and especially -post-emergency programme management. In case of an emergency these people are well equipped and prepared to assist with the emergency programme management tasks. This would also fit well in the partnership concept between ECHO and the implementing NGOs. In this way regional presence could also be better secured without the need to keep an expensive field office open in times of relative calm.

19- Also both at field and at the administrative level in Brussels it is recommended to actively recruit experts (with field experience) from NGOs as they have a notion about problems that occur in the field.

DISASTER PREPAREDNESS

20- Two positive examples were observed: In one rehabilitation project significant effort was made to counteract the on-going erosion processes. Tree-planting and reforestation had been carried out and had built awareness among the beneficiaries to protect their environment. Another initiative as follow-up after finalisation of a resettlement project was the set-up of a communication network with short-wave radios between remote communities and the municipality. Both projects were financed by DIPECHO. It is recommended that ECHO and DIPECHO should integrate their programmes more in the future as these projects may reinforce each other.

21- Linking humanitarian emergency aid, rehabilitation and development is a necessity. At this moment ECHO as office for emergency aid has been functioning rather separated from the normal development programmes of the EU. Also the structure of ECHO on one hand and other EU-directorates like DGVIII and DGIB on the other seem to play a role in this. The ECHO structure is transparent and simple. Lines between the main office in Brussels, the field offices and the NGO partners is short and the relationship between them is extremely good according to unanimous opinion of representatives of partner NGOs. It is clear that by taking on rehabilitation projects ECHO has moved from emergency response to more development type projects. Given its mandate of financing project with a maximal period of 6 months the general results are satisfactory. Nevertheless it should be questioned if these types of projects should be kept under the mandate of ECHO or should be more under the mandate of regular development programmes. It is recommended that this issue should be discussed within all stakeholders involved.

22- Having taken notice of other evaluations of rehabilitation projects all over the world a great number of problems do not seem specific for Central America at all and merely seem to be generally related to these type of projects. It would be very much recommendable that ECHO would take the initiative to organise seminars for all stakeholders involved to discuss the experiences so far with these kind of projects and to see how an

institutional learning process can be started in this relative new field of development.

6.2 METHODOLOGY OF PROGRAMME PLANNING

In general the methodology of programme planning for the Global Plan appears to be okay. The process of targeting beneficiaries is satisfactory, participation of beneficiaries in the construction of their houses has proven to be a good concept. Integration of disaster preparedness in the rehabilitation projects observed had a positive impact on both the physical environment in which people lived as on their consciousness and awareness and feeling of responsibility for their environment.

As critical notes to the applied methodology can be said that more time and emphasis should be given to the process of resettlement site selection and closer co-operation should be realised between the local authorities and the implementing NGOs.

Linking development and emergency aid in relation to resettlement projects is an area which should be discussed between all stakeholders involved especially between ECHO, DGVIII and DGIB. A stronger integration of project objectives may be benefiting the general project results.

6.3 LESSONS LEARNED

1- Presence of national and international NGOs in the field and the good relationship between them and ECHO is the main cause for the successful, effective and swift response against the general human suffering caused by hurricane Mitch in Central America in 1998.
2- In general the methodological approach of ECHO using its Global Plans appears to be effective.
3- In general the duration of resettlement projects of 6 months is too short and should be expanded to at least 18 months.
4- Lack of time and spending pressure on the side of the NGO and indifference on the part of the local authority has led to poor rehab site selection and consequently of failure of many rehab projects.
5- Strong and active interest on the part of local authorities has proven to be a crucial success factor of a rehabilitation project.
6- A go no-go decision moment in financing rehab projects is currently not present. It is recommended to incorporate such a safety valve in the project cycle in order to prevent failure at a later stage. This go no-go decision moment should be taken after site selection. An independent integrated assessment of the complete project by ECHO should be made (even if ECHO would only fund part of the project!)
7- Housing and resettlement projects are a relative young field of expertise in humanitarian relief and aid. Experiences with implementation of these kind of projects should be shared among all stakeholders.
8- ECHO has filled in a need to provide temporary and permanent shelter as part of its mandate to mitigate human suffering as a result of man-made or

natural disasters. It has thereby gradually moved to more development kind of interventions. At this point it should assess the fact if and how it wants to continue her efforts in the rehabilitation sector and how further integration with DGVIII and DGIB can be realised.

9- Bad site selection has proved to cause unacceptable problems for the beneficiaries, both economically and socially.

10- If a site assessment for permanent housing turns out negative a rehab project should be stopped because it may do more harm than good in the end.

11- Linking emergency and development remains a dead letter as long as ECHO and development agencies within the EU, especially PRRAC, keep on operating under separate, administrative umbrellas. ECHO traditionally carries out typical emergency operations but it also gets involved in the grey area of rehabilitation where often, immediate action is needed but where its interventions have a long-term impact. This is especially true for the rehabilitation, and water & sanitation sector. In these cases (administrative) integration of ECHO or at least strong inter-co-operation with the development services of the EU is strongly recommended.

12- Disaster preparedness may point to a wide range of interventions from reforestation to awareness building among a population at risk. ECHO has to decide which activities can or cannot be justified under its mandate.

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LIST OF ABBREVIATIONS AND ACRONYMS

ACRONYM/ABBREVIATION	DESCRIPTION
#	Amount of…. or number of…….
AAA	Agro Action Alemana (GAA) Deutsche Welthungerhilfe
ACH	NGO Sp. Accion contre el Hambre
ASCUR	NGO Sp.: Accion para la Cooperacón con el Sur
Atlas Logistique	Action Transport Logistic Assistance Service
B	Belgium
CA	Central America
CEPS	Centro de Estudio y Promoción Social
COOPI	NGO It. Cooperazione Internationale
D	Germany
DGIB	European Union Development Bank
DIPECHO	EU Disaster Prevention and Preparedness Program
ECHO	European Commission Humanitarian Office
ECLAC	European Commission for Latin America and the Caribbean
ECU	Old European Currency Unit
Es	Spain
EURO	New European Currency Unit
F	France
GB.	Great Britain (see also UK)
IDB	International Development Bank
Ir	Ireland
It.	Italy
L	Luxembourg
Manzana	Unit of surface area equal to 0.7 hectares (in Central America)
MINSA	Nicaraguan Ministry of Health
NGO	Non Governmental Organisation
NL	The Netherlands
O&M or OM	Operation and Maintenance
OIM	Organizatión International de las Migraciones (Engl : IOM)
Piso-techo	Construction which can be used as a semi-permanent shelter, made of a cemented floor, with minimally 4 supporting vertical pillars made of, either reinforced cast-concrete or a heavy wood sort and a wooden roof support frame with galvanized corrugated iron sheeting as roof cover. The walls are made of fibre-reinforced plastic sheeting. The structure is earthquake resistant and costs less then 500 Euro and can be transformed in a normal house with local materials and know-how by adding windows and doorframes and making walls of mud bricks.
PI	Project leader
PRRAC	Programa Regional para la Reconstrucción de America

	Central (via DGIB)
Pt	Portugal
PTM	Paz y Tercer Mundo
RoH	Republic of Honduras
RoN	Republic of Nicaragua
ToR	Terms of Reference
UK	United Kingdom (see GB)