

**EUROPEAN COMMISSION
ECHO
HUMANITARIAN AID OFFICE**



**EVALUATION of ECHO's AID
to the VICTIMS of
HURRICANE MITCH**

**FINAL REPORT
SECTORS:
WATER & SANITATION**

Dates of the Evaluation: 17 January to 21 February 2001
(Central America)

Name of the Evaluator: Martin Ede

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To the VICTIMS of HURRICANE MITCH
FINAL REPORT - WATER & SANITATION SECTORS

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EXECUTIVE SUMMARY

INTRODUCTION

The Global Plan: this evaluation covers the global plan (ECHO/TPS/210/1999/0600) which amounted to 16 MEURO for aid to the victims of Hurricane Mitch in Central America, specifically Nicaragua, Honduras, El Salvador and Guatemala. The prime focus of the evaluation was the Water and Sanitation sector both at an institutional and community level. Reference, where appropriate, is made to the previous decisions of 4 November 1998 (6.8MEuro) and that of 21 December 1998 (9.5MEuro)

Dates of the Evaluation: The fieldwork for this evaluation was carried out between 17 January and 21 February, 2001. The draft report was analysed with ECHO on 5 and 6 of April. The final report was to be delivered in the first week of May, 2001.

Consultant's Name: Mr Martin Ede

Purpose and Methodology: the purpose of the evaluation is to assess the suitability of the Global Plans in favour of the victims of Hurricane Mitch and the level of programme implementation. Furthermore, the evaluation analyses the strategy and other aspects such as efficiency and effectiveness. The link between relief, rehabilitation and development (LRRD) is analysed and an exit strategy is proposed. The future of ECHO's funding and actions which could be handed over to PRRAC (Project for the Recovery and Rehabilitation of central America) are recommended.

The evaluation methodology covered site visits, interviews with stakeholders, partners and staff at the ECHO offices in Central America. The evaluation also included a review of the documentation available from partners and the Commission offices in the region. Specific documents were also made available at the ECHO offices in Brussels. However, vital consolidated financial information was not available.

CONCLUSIONS

The following conclusions refer to the three different decisions

1. Specifically for the water and sanitation sector ECHO should recognize that the quality of the investment is directly proportional to the time allocated to construction, community education and organization. A significant effort is needed in these latter fields to ensure that systems are durable, long lasting and cost effective.
2. Despite the imperative need for an improvement in the environmental management of watersheds, the "Strategic Guidelines for ECHO's action on Central America following Hurricane Mitch" makes no more than a passing mention reference to the theme of improved environmental management.
3. There is a significant variation in the skills vested in the community water committees between different partners. Individual NGO's have all highlighted the need to provide adequate training for the water committees.
4. The period of time allocated to the implementation of the ECHO projects in the field of water and sanitation does not allow sufficient effort to be dedicated to the training of water committees nor stakeholders.
5. As indicated in the section on local capacity building, partners may not allocate sufficient time for the training of stakeholders in all the areas required. Training in preparation, mitigation and prevention of disasters is no exception.

6. The implementation of physical measures for water source protection is also an area that may be required to conserve water sources.
7. In immediate post-emergency situations ECHO is not in a position to accurately quantify the levels of assistance needed by the affected population. Nevertheless the NGO partners, particularly those who already have a presence in the disaster area, are among the best informed entities in the disaster affected region. It is to be assumed that the partners are able to quantify expected results in terms that go beyond simple monetary expenditure.
8. The issue of gender, in a demand responsive environment is not given sufficient emphasis. Partners tend to gloss over the important issues associated with the role of women in a durable project that meet felt the needs of both genders in the community.
9. The intervention of ECHO was a clear response to the immediate, perceived, needs of the affected population.
10. As neither the first and second decisions included objectives or indicators, it is not possible to evaluate the relevance of objectives in any great depth.
11. In the interest of ensuring both efficiency and effectiveness, it is important that partners, who have access to detailed information, on the ground, are able to clearly quantify the level of effort and the expected achievements. It is felt that this is an important step to ensure that the achievements of individual partners can be quantified. As ECHO works with partners, the sum of the individual efforts provides the global picture of what was achieved with the resources from each decision.
12. Technical shortcomings in construction caused a reduction in the effectiveness of the assistance in some cases.
13. The effectiveness of water installations could possibly be reduced by environmental damage in the watersheds that supply the drinking water systems due to the reduced flow of water at the sources used by each system.
14. It is felt that insufficient emphasis was placed on deepening the issue of visibility beyond stickers, tee-shirts, caps and signs, despite a clear recommendation to this effect in the strategic guidelines.
15. The presence of the ECHO representatives in the region was obviously very opportune and useful for the implementing partners. Nevertheless it is felt that the design of the decisions did not facilitate adequate monitoring and evaluation of the projects, which were implemented.
16. Evidently to role of NGO's is a key factor in ensuring a rapid response in a disaster situation, but there are varying technical, managerial and administrative standards among partners.
17. The role of ECHO in relation to the partners could be strengthened to ensure that the NGO's are true partners. For example the NGO's have a wealth of local knowledge that would be a useful input to the design of future emergency interventions and the subsequent monitoring and evaluation during or after implementation..

RECOMMENDATIONS

The following recommendations are a direct result of the analysis raised in the text of this evaluation:

1. It is essential to develop an implementation model that encourages long term durability while meeting the needs of the population in the emergency or post-emergency situation. In this sense, the following elements should be included:
 - 1.1 Self-help or skilled labour from the village
 - 1.2 Widespread community education and organisation
 - 1.3 Participation of women at all levels of project implementation
 - 1.4 The application of community management principles from the day of initial contact with the community through to the installation or handover to the community and subsequent O&M.

2. It is felt that an ECHO supported component of environmental management is needed, linked to the water and sanitation programme, in environmentally fragile areas such as Central America. This should be especially directed at the river basins that form recharge areas for the aquifers and watersheds that supply the water for the drinking water systems.
3. ECHO should analyse the immediate need for both emergency tanks, which are only temporary and expensive solutions to water supply and the very real requirement in the aftermath of an emergency for the rehabilitation of investments in the provision of essential water supply and sanitation services. Both forms are equally valid and provide essential services.
4. ECHO should develop training initiatives in key areas, such as the development of appropriate construction techniques for water and sanitation installations, to ensure that NGO's are really effective partners and that the investment of resource is durable.
5. The training of water committee members in the O&M of systems should be given the highest priority, to ensure that significant investments in the sector are durable and respond to the felt needs of stakeholders over the long term. Similarly, stakeholders should be afforded the sufficient education to achieve changes in the customs and habits related to water use and sanitation, which will result in longer-term benefits in health, as well as freeing up time for productive activities.
6. The orientation of water and sanitation projects should be developed such that sufficient resources can be dedicated to the preparation of communities to face and take measures to mitigate the effects of potential disasters. This necessarily includes increasing the length of time dedicated to project implementation.
7. Partners should assist ECHO improve the description of relevant objectives by clearly quantifying levels of effort and the results expected from an intervention. ECHO should consolidate the results, allocation of expenditure and actual expenditure for given periods that would permit more detailed regular monitoring and analysis of achievements. The quantification of expected results would also be needed to allow sufficient in depth analysis of the efficiency and effectiveness of each individual intervention.
8. It is recognised that the development of objectives and indicators for emergency projects is not an easy task given the short notice that is generally available to design the initiative. Nevertheless, from the previous point it is clear that indicators and objectives should form an integral part of an ECHO emergency proposal.
9. ECHO should allocate and finance a minimum period for individual water and sanitation project implementation that should not be less than 6 months.
10. ECHO guidelines for project implementation should be elaborated, which not only include construction standards but also the desirable requirements for community education, organization, operation and maintenance.
11. ECHO finance for systems (water and sanitation) should include the necessary resources to implement required community organization and education. Implementing partners must develop the capacity to undertake education, awareness raising and community organization parallel to system construction activity.
12. Further contact should be established to permit close coordination between projects like ALA86/20 and any future ECHO rehabilitation initiatives in the water and sanitation sector in Honduras (or other countries should similar projects exist).
13. It is important to ensure that close coordination on choice of beneficiaries, community contributions, O&M costs and cost recovery is implemented between ECHO and PRRAC.
14. The partners should accompany the physical construction measures with educational and organizational initiatives to support the most vulnerable groups, particularly women.
15. The concept of disaster preparedness should be emphasised among partners to such an extent that it should be become a routine component of any ECHO (or for that matter NGO) intervention in the region.

16. ECHO should take advantage of the positive relationship with NGO's to further deepen their understanding of the link between relief, rehabilitation and development.
17. ECHO should encourage environmental management as one of the most effective disaster prevention measures for Central America.
18. Partners should be encouraged to broaden the issue of visibility beyond a simplistic approach of maximum coverage for the word "ECHO". The concept should include community "spots" or very short workshops to explain ECHO based on maps, photographs and other appropriate didactical instruments. This recommendation builds on the text of the strategic guidelines.
19. ECHO partners should be encouraged to adopt a more vigorous approach to implement actions in the field of gender, to reduce the effective discrimination against women – with actions directed at both men and women. The partners should take specific steps to foster the participation of women at all levels of project implementation.
20. ECHO should ensure that a demand responsive and gender sensitive approach to project implementation is effectively incorporated in the short project implementation time frame within ECHO's mandate.
21. The effective provision of drinking water requires sustained chlorination. Sufficient community education and organization initiatives should be directed to achieving regular treatment of the water supply with chlorine.
22. It is important for ECHO to establish guidelines to outline the internal administrative and organizational information needs required. This would permit partners to clearly establish monitoring and reporting mechanisms that should be implemented, in order to meet ECHO reporting and control standards.
23. ECHO should encourage the development of a more effective partnership with the NGO's to gain maximum benefit from the comparative advantage that each entity has on the ground in the region.
24. PRRAC should build on the specific knowledge gained by implementing partners and the ECHO field representatives in the region when implementing water and sanitation projects.
25. ECHO and PRRAC should coordinate closely about the provision of water and sanitation services to those stakeholders where ECHO has had the greatest impact – rural communities.

LESSONS LEARNT

This particular evaluation of the ECHO's aid to the victims of Hurricane Mitch draws on both extensive field work (information collected from interviews in 16 communities) and analysis of the programme with 10 implementing partners. The lessons learned are a reflection of the analysis that followed this work in the field. It is felt that this section is not an academic exercise but a practical reflection of the positive work of the implementing NGO's and the concerns of stakeholders at different levels. It represents a concrete desire amongst the partners and stakeholders to achieve measurable improvements in programme implementation.

1. The implementing partners require coherent guidelines and orientation from ECHO in both the technical and social fields which would provide them with the information required to implement top quality programmes. This would ensure that the standard of work in both fields is maintained at a high level.
2. It is recommended that the design of emergency programmes be undertaken in close co-ordination with the NGO partners to ensure that the maximum use is made of their evident on-the-ground knowledge.

3. The design of emergency programmes requires an investment of effort to allow sufficient orientation to be given to adequate objectives and indicators, which can guide the implementation initiatives of ECHO and partners.
4. It is important to not cause confusion between stakeholders about the role of different EU bodies. Therefore the dissemination of the need for different implementation approaches should be explained to the stakeholders.
5. The achievement of durable water and sanitation systems implies a significant investment in time and resources for community education and organisation to ensure that the intended level of service is provided on a constant basis.
6. The most appropriate method to operate and maintain village level water and sanitation systems is adopting a community management focus from the first day of contact with the community. In general, it is evident that local governments and water authorities in the countries of Central America do not have sufficient resources to operate and maintain the community systems. The partners and ECHO should build on the positive experience of other programmes, such as the World Bank Water and Sanitation Programme¹
7. The importance of the role of community education and organisation is not to be underestimated. The investment in this field requires time, beyond the period normally allocated to implement ECHO emergency projects. Nevertheless, ECHO should adopt an orientation that permits the development of these important activities, which are essential ancillary elements to the water and sanitation system construction itself. The length of time allocated to the implementation of complete water and sanitation projects is necessarily longer than the time traditionally destined to ECHO emergency projects.
8. NGO's have proved to be flexible and efficient implementation partners, which are the principle characteristics required at the time, or in the immediate aftermath, of an emergency. Nevertheless, it is evident that the work in the field of disaster preparedness requires an investment of effort that goes beyond the short- term perspective of emergency assistance. Similarly, durable drinking water and sanitation installations should be considered in the same light.
9. The environment is probably the single most important issue to be addressed in Central America at present. The initiatives of DIPECHO and ECHO in the field of disaster prevention are an effective complement to current emergency programmes. Nevertheless, it must be taken into account that disasters in Central America, such as the effect of Hurricane Mitch, will worsen unless measures are taken to mitigate the negative effects of extensive environmental mismanagement in the region.
10. Initiatives in the field of environmental management are of paramount importance to ensure that water sources are not negatively affected by deforestation that causes changes in the reflectivity of the land surface or reduction in the infiltration rates of water to the sub-soil.
11. The issue of visibility goes beyond posters, caps, tee shirts and flyers. It is essential to ensure that stakeholders are fully aware of who is ECHO, the source of funding and the perceived objectives of a given emergency programme. Therefore, partners and ECHO are well advised to consider widening the scope of initiatives beyond the field of simple caps, signs and tee-shirts to include significant initiatives to interchange information about ECHO with the stakeholder communities. It is important to change the emphasis of visibility from one of being seen to being understood.
12. NGO's should be considered as real partners to ECHO who can offer significant on-the-ground knowledge and specific project implementation skills, which are very useful in emergency and rehabilitation situations.

¹ The World Bank Water and Sanitation Programme has a useful web site at <http://www.worldbank.org/html/fpd/water/> .



MAIN REPORT

**AN EVALUATION OF ECHO'S AID TO CENTRAL AMERICA,
HURRICANE MITCH,
GLOBAL PLANS 1998 AND 1999, WATER AND SANITATION SECTOR - 2000**

I. INTRODUCTION

The Global Plan

This evaluation covers the global plan (ECHO/TPS/210/1999/0600) which amounted to 16 MEuro for aid to the victims of Hurricane Mitch in Central America, specifically Nicaragua, Honduras, El Salvador and Guatemala. The evaluation covered the Water and Sanitation sector of the plan mentioned above. It should be noted at this stage that this is an evaluation of ECHO and the Global Plan, not the implementing partners. The prime focus of this evaluation was the Water and Sanitation sector both at an institutional and community level. Reference, where appropriate, is made to the previous decisions of 4 November 1998 (6.8 MEuro) and that of 21 December 1998 (9.5 MEuro).

Dates of the Evaluation

The fieldwork for this evaluation was carried out between January 17 and February 21, 2001. The draft report was analysed with ECHO on 5 and 6 of April. The final report was to be presented to ECHO after reception of feedback, provided in the first week of May, 2001. The evaluation was carried out by Martin Ede for Prolog Consult.

Purpose and Methodology

The purpose of the evaluation is to assess the suitability of the Global Plans in favour of the victims of Hurricane Mitch and the level of programme implementation. Furthermore, the evaluation analyses the strategy and other aspects such as efficiency and effectiveness. The link between emergency, rehabilitation and development is analysed and an exit strategy is proposed. The future of ECHO's funding and actions which could be handed over to PRRAC are recommended.

The evaluation methodology covered site visits, interviews with stakeholders, partners and staff at the ECHO offices in Central America. The field visits followed the methodology of structured and casual interviews with different representative stakeholders. The role of the implementing partners greatly facilitated contact with population who had benefited from the aid provided under the decisions or the Global Plan. The evaluation also included a review of the documentation available from partners and the Commission offices in the region. Specific documents were also made available at the ECHO offices in Brussels. However, vital consolidated financial information was not available which would have allowed the consultant to conclude vital financial analysis.

2. MAIN FINDINGS

2.1. IMPACT

2.1.1 A Clarification

In the following sections, the impact of the Global Plans is analysed with reference to the original proposals presented by the NGO's, and the needs identified for finance under each decision.

It should be reiterated that, despite the considerable amount of information gathered from individual partners and the ECHO offices in Brussels, it was not possible to gain access, either in the region or Brussels, to vital global financial reports needed to complete the requested cost analysis.

2.1.2 Analysis

The following quote serves as useful introduction to the framework of a successful emergency and rehabilitation programmes. The text, quoted in the Independent Evaluation of the DEC Central American Appeal, the Code of Conduct, the Red Cross Movement, is as follows:

“Effective relief and lasting rehabilitation can best be achieved where the intended beneficiaries are involved in the design, management and implementation of the assistance programs”.

The text above serves to orient the reader about the wider implications of the design work necessary for relief and rehabilitation initiatives and encourages reflection on the significant implications of the major relief and rehabilitation efforts that are implemented under the auspices of ECHO.

The individual projects in the field of water and sanitation had a significant impact in the reduction of human suffering. The various respondents to field interviews² all attested to the positive nature of the installation of water and sanitation systems. The potential of the installation of potable water and sanitation systems to contribute to a reduction in water born diseases demonstrates the value of the assistance.

In Honduras, Mitch destroyed 1,683 potable water systems, 79 in Nicaragua, 155 in El Salvador and those of over 300 communities in Guatemala. The following table shows a resume of the damage to water systems, sewage systems and latrines.

TABLE 1 NUMBER OF SYSTEMS DESTROYED

Type of system destroyed or damaged	HONDURAS	NICARAGUA	GUATEMALA ³	EL SALVADOR
Drinking water systems	1683	79	>300	155
Latrines	85,000	37,000	2,500	9000
Sewage systems	NA	9	2	14
Wells	NA	NA	NA	7,622

The table 2 below shows the number of persons affected by Hurricane Mitch in the water and sanitation sector.

TABLE 2 NUMBER OF PEOPLE AFFECTED

Type of system destroyed or damaged	HONDURAS	NICARAGUA	GUATEMALA	EL SALVADOR
Drinking water systems	4,500,000	1,440,000	>50,000	NA
Latrines	425,000	185,000	105,000	45,000
Sewage systems	NA	NA	2 systems destroyed	NA
Wells	NA	NA	NA	38,000 ⁴

2.1.3 Reduction of Human Suffering

The rehabilitation or reconstruction of water and sanitation systems by ECHO funded NGOs represented a significant proportion of the systems that existed in Honduras and Nicaragua before Mitch. Although the level of effort is smaller in El Salvador and Guatemala the value of the aid in global terms cannot be overlooked.

Overall, the fraction of the 4 country population that benefited from the ECHO assistance in the field of water and sanitation was significant. However, it must be emphasised that this considerable investment only represents a small increase on pre-Mitch levels of service.

² 16 in-depth field interviews were held in different communities about the programmes from 9 NGO's

³ Source ECHO 2nd decision, UNICEF

⁴ Based on an average of 5 persons/well

Human suffering is relative to the prevailing conditions in the country and in this case, cannot be judged in absolute terms. The populations of the villages that benefited from the assistance have been able to perceive a real reduction in the hardships that were a direct result of the Hurricane. The member of the household (in almost all cases the women have direct responsibility for this task) who fetches the drinking water was forced to use alternative (more distant sources) of water immediately after the hurricane. The reconstruction or rehabilitation of water systems has meant that many women are now free to dedicate their time to activities other than fetching water. The significance of this achievement for an important sector of society cannot be under-estimated.

2.1.4 Dependency

A dependency on humanitarian aid could occur at two levels. At the first, at a macro or national level was where dependency did not occur, due the fact that the assistance represented reconstruction or rehabilitation of national efforts in the sector (either through other assistance programmes or with national resources). The second level where it is appropriate to undertake an analysis is at the community level.

At this point, it is important to recognise that the effect of dependency is largely manifested where the type of assistance is paternalistic. The rehabilitation of water and sanitation systems after an emergency is, by the very nature of the intervention, often somewhat paternalistic. The affected communities are bereft of resources and are unable to make a significant financial or material contribution to a project.

The very nature of ECHO humanitarian assistance, in emergency or post-emergency situations means that considerable care must be taken with the implementation methodology. The precautions or appropriate methodology can ensure that families who have been severely affected by a natural disaster can recover their self-esteem. The construction of a drinking water system or sanitation services (be they latrines or full sewage systems) requires both skilled and unskilled labour. In an interesting experience with the housing sector, the Red Cross in Nicaragua trained and hired skilled labour from the local community, rather than importing labour from other sources. This had the effect of injecting badly needed income into the community, while emphasising the need to acquire new skills and directly working with the community to resolve a problem (lack of shelter).

It is not unreasonable to employ the local labour model in the construction of water and sanitation systems, where community self-help is not possible. However, experience has demonstrated that a high level of community participation tends to encourage the long-term durability of water and sanitation projects. The purpose behind this discussion is to illustrate the ease with which erroneous implementation models may tend to encourage dependency on humanitarian aid

In the evaluation no evidence of dependency was encountered at a community or institutional level. Nevertheless, this broaches the need for analysis of the issue of durability, which will be addressed at a later stage in the evaluation.

2.1.5 Effect of Humanitarian Aid on the Local Economy

The effect of the humanitarian aid in the water and sanitation sector can be seen in a number of ways. At the level of the community, where the reposition of badly needed infrastructure has an indirect effect on the local economy, the following facets were considered important:

- The women (who, as indicated, are those who spend most time carrying water to the household) were, without exception very appreciative of the rehabilitation or repair of water and sanitation systems. This gave them more time to participate in activities other than carrying water, which may or may not have been productive. The greater participation of women in economically productive activities (rather than carrying water) has a positive effect on the local economy, although not quantifiable in this short evaluation.
- The water system provides, on a small scale, employment for the person or persons in charge of operation and maintenance.
- It is anticipated that the improved health of the stakeholders will lead to greater productivity.

At the family level, the increase in time (mentioned earlier) available to the water carriers allows more effort to be destined to many other interests, among these are the generation of income.

2.1.6 Effect on Incomes

The positive effects of water and sanitation systems have an impact on incomes. However, during field visits it was neither possible to quantify the effects nor establish a direct causal relationship other than to hypothesise that the increased availability of time at the disposal of the water carriers may be dedicated to income generation. However, factors such as the existence of appropriate opportunities or adequate communication with different interest groups or stakeholders affect the potential to generate income.

It was evident that stakeholders considered the aid in the water and sanitation sector in a positive light. In numerous interviews, the provision of water services was very much appreciated and the installation of latrines was seen in the same vein, due to both economic and social factors.

2.1.7 Effect on Health and Nutritional Practices

Each of the water and sanitation projects had an integral component of health education. The field interviews clearly supported the notion that the health of the families had improved with the provision of potable water. The water was used not only for drinking but also for washing hands, plates and cooking utensils, as well as bathing. The improved sanitation facilities also had a marked positive impact on the health of family members.

A note of caution, although the improvement of the health of stakeholders was amply attested by the individual community members, during the evaluation it was noted that the majority of Water Committees were not correctly chlorinating the water. The water arriving at the standpipe may have been potable but the absence of a correct dose of chlorine may have contributed to contamination in the container used to ferry the water to the point of use. There is considerable potential to further improve the quality of the drinking water supplied through the different systems by ensuring effective application of chlorine before water reaches the point of use.

A point related to the water quality is whether stakeholders should boil the water if the chlorination is not adequate. Although the boiling of water can increase the quality, the need to consume copious quantities of firewood can have a negative effects on the environment, which in turn can reduce the re-charge of aquifers,

2.1.8 Environmental Effects

The degradation of the environment is particularly evident in the watersheds of the recharge areas for the aquifers supplying water to the different ECHO financed potable water systems. Evidently, an emergency or post emergency intervention is not designed to provide long or medium term environmental education, even if it is urgently needed.

It is important to analyse the characteristics of the disaster that followed Hurricane Mitch to place the need for environmental mitigation measures in context. The heavy rains that accompanied Hurricane Mitch caused unprecedented levels in the rivers in the lowlands of Central America. However these rains also contributed to the excessive runoff that caused widespread erosion. The runoff is precisely the factor that caused the accumulation of water and sediments in the river basins that lead to the flooding. The process that occurred was as follows:

- The environmental degradation in the upper tributaries reduced the infiltration of the heavy rains to the subsoil. Under circumstances where there is ample vegetation cover, the roots of the undergrowth and trees act as "guides" where water can infiltrate to the sub-soil.
- In Central America the widespread destruction of the natural vegetation (especially on the fragile hillsides) lead to increased runoff, as rainwater was unable to filter to the subsoil.
- The high level of runoff caused erosion of the fragile hillsides (left without vegetation cover) and therefore the already swollen rivers were carrying an excessive load of sediment.

- The reduction in speed of the floodwaters in the rivers on the plains caused the sedimentation of the eroded soil in the riverbeds. This had the effect of raising the level of the riverbed and the river was unable to carry the excessive amount of water. The result was widespread flooding.

There is no doubt that the amount of rain falling during Hurricane Mitch was unprecedented and would have caused some flooding whatever the state of the environment. However the degradation of the vegetation cover on the hillsides definitely contributed to exacerbate to effects of the heavy rain by raising the riverbeds (through the deposits of silt) and reducing the carrying capacity of the rivers.

The “Strategic guidelines for ECHO’s action in Central America following Hurricane Mitch” state: “..... it is a priority to intensify the prevention programmes in the health field as well as in the preparation, prevention and mitigation of natural disasters”.

Several possibilities are foreseeable: preventive actions included humanitarian actions, autonomous preventive actions or a combination of the two.”

In view of the characteristics of the Hurricane Mitch disaster and the recognition of the need for “autonomous preventive action” it is of paramount importance to reinforce the awareness of the need to improve the condition of the environment in the Central American region.

There is another reason broaching this theme in this section on water and sanitation. The excessive runoff of rainwater, mentioned above, means less infiltration to the subsoil and consequently reduced recharge of the aquifers. The underground aquifers are the very sources of water that have been used in many of the drinking water systems, built with funds from ECHO. The potential lack of infiltration of the surface water underground may reduce the flow in the springs or the level of underground water will tend to be lower thus leaving pumps higher than the level of an aquifer. The end result could be that the expensive investments made by ECHO to supply potable water may, in some cases, become inoperable or give a significantly inferior service due to the effects of environmental degradation.

It is therefore imperative to contemplate actions to mitigate and reverse the damage to the environment in the region, particularly the watersheds that collect water for the drinking water systems. If action is not taken promptly the effect maybe widespread potable water shortage and many of the systems, which have been installed by ECHO, could operate at reduced flow or simply not have a viable water source. The implementation of an environmental management programme for the watersheds does not imply an excessive investment but it would insure that the investment made to date, in water supply systems, was not wasted as water sources tend to dry up in the coming years.

It is interesting that the guidelines from ECHO state “Moreover, partners will have to pay utmost attention to environmental aspects and to the prevention of disasters”. From the previous paragraphs it should be evident that the biggest single effective way of implementing disaster prevention is improved environmental management. During the evaluation, the efforts in the field of environmental management were analysed and it is felt that, despite the importance of the theme for the durability of water systems, not enough emphasis was given to environmental improvement actions or environmental education to improve the environmental quality of watersheds that supply the aquifers for ECHO systems.

2.1.9 Impact on Capacity Building

The strategic guidelines for ECHO’s action in Central America following Hurricane Mitch make no mention of the need for capacity building. Areas where this would be required are health, environmental management, water and sanitation system operation and maintenance. The latter should be implemented by a representative water and sanitation committee, which has received adequate training for the purpose. The strategic guidelines do mention “local participation” emphasising that of women.

It is felt that the short duration of ECHO interventions discourages a concerted effort in the field of the training and organisation of sustainable water committees. This situation was clearly recognised by NGO

partners who, in some cases, implemented the most essential training with additional (non-ECHO) resources.

Despite the difficulties mentioned above, during the field visit, it was found that drinking water committees (CAP – Comité de Agua Potable) had been formed in all the villages visited. The varying degree of operability of the committees demonstrates the different approaches to training and setting up the committees adopted by individual partners.

It was found that NGO's recognised the need for significant investments in the field of training and often complemented ECHO finance with other resources. However, this was not true in all cases and it was evident that CAP's were sometimes lacking in appropriate training.

2.1.10 Effect on the Preparation, Mitigation and Prevention of Disasters

The evaluator found that the long-term effect of the provision of water and sanitation services was positive in the above mentioned field, where partners had dedicated sufficient effort to the necessary education and training in environmental management, coupled with physical measures, such as retaining walls.

In section 1.9 of this report a clear analysis of the environmental problems is presented. In short, the mitigation and prevention of disasters in the watersheds is intimately linked to the environmental education measures that should be part and parcel of the water and sanitation system installation.

2.2 RELEVANCE OF OBJECTIVES

The global plan represents a major initiative by ECHO to resolve the many problems that arose as a result of Hurricane Mitch. In the field of water and sanitation, a significant population benefited from the reconstruction or rehabilitation of water and sanitation systems, as a direct result of the two initial decisions and the Global Plan.

In resume the decisions were as follows:

4 November, 1998	MEuro 6.8	1 st decision
21 December, 1998	" 9.5	2 nd decision
12 December, 1999	" 16.0	Global Plan

Two additional decisions were taken, that are not part of this evaluation:

11 August, 2000	MEuro 1.5	Decision Honduras
11 August, 2000	" 1.84	Decision Nicaragua

This particular evaluation is concerned with the Global Plan, although reference is made to the first and second decisions, where appropriate.

2.2.1 First Decision

The first decision allocated the sum of Euro 6.8 millions for work with 13 partners in the field of "urgent humanitarian assistance". On 4 November, the data available, which described the problems faced in the water and sanitation sector, was very limited. Fortunately, ECHO worked with partners who were already implementing ECHO financed projects, which provided certain on the ground knowledge.

Relevance of Objectives

This first decision allocated resources to 5 programmatic areas including water and sanitation. The decision defined geographic areas, but fell short of indicating the population who would participate in the initiatives due to the nature of the emergency facing the affected countries in Central America at the time. This approach is understandable given the urgency of the situation. Humanitarian needs assessments were in progress when the decision was made.

In the immediate aftermath of an emergency it is not practical to indicate more than rough estimates of the aid to be provided. Therefore, the evaluator concurs with the position ECHO has adopted by only describing areas of assistance in the decision.

Choice of Beneficiaries

The choice of beneficiaries for the first decision was “impossible to determine” and the author agrees with this affirmation from the text of the first decision. However, it is evident that individual partners were able to target interventions to the most vulnerable groups, particularly based on the detailed knowledge of the intervention zones gained from previous interventions.

Deployed Strategy

As indicated the first decision was an immediate response to the emergency that had arisen as a result of the Hurricane. The strategy of restoring critical water supply and sanitation services to the priority or most affected areas was definitely appropriate at that stage.

2.2.2 Second Decision

The second decision amounted to Euro9,500,000 and was approved on 21 December 1998. The decision was characterised by a quantification of the level of activity expected from each partner. However, at no point in the document describing the decision were any objectives, or much less indicators proposed. As the decision described the “activities” to be undertaken it is not possible to evaluate the relevance of the objectives with any degree of accuracy.

The NGO partners fortunately established objectives for their initiatives, which has greatly facilitated the task of analysing and reporting the results. However, in general, the partners lacked any indicators. If the partners can establish objectives and a timetable, then ECHO should also be able to establish overall objectives in the same manner.

As stated above an evaluation of the achievements of ECHO in general or the achievements of each of the decisions and global plan based on more objective criteria of project design is not feasible, given the current “state of the art” for the documents describing each decision.

Deployed Strategy

In Nicaragua, among other aspects, the second decision indicated that finance would be forthcoming for “NGO’s that are already actively involved in: “training and organisation of local water and sanitation committees”. It is believed that this was an important component of the strategy associated with the second decision. Obviously it recognised that the limited time allocated for project implementation with funding from ECHO does not permit the development of sustainable “training and organisation”. Despite the recognition of the need for “training and organisation” in Nicaragua, the other countries that benefited from the second decision were not specifically targeted with training and organisation initiatives. It is felt that the short-term nature of the ECHO strategy in the region (except for Nicaragua) was a negative aspect of the ECHO decisions.

2.2.3 1999 Global Plan

The 1999 Global plan has an ample description of the situation that existed in Central America after Hurricane Mitch and the emergency aid provided from ECHO, EC member states and other entities from the international community. It also describes the lessons learned and the humanitarian situation. It would be expected that the detail of the analysis, which accompanied the 1999 Global Plan, could also facilitate the definition of the objectives of the intervention and indicators.

The plan describes a methodological approach, sectors of activity and the financial decision. However at no stage, is any mention made of any objectives or indicators for the plan itself.

The evaluator considers that the lack of objectives in the global plan is a fundamental weakness in the design. The “objectives/type of aid” are stated for each partner, but the aggregate of these proposed levels of activity is not presented. Obviously, the individual initiatives undertaken by each partner have discrete characteristics, but it is important to orient the specific interventions with overall objectives.

The consultant concurs with opinion expressed on page 59, section J.1.2. of the document “Evaluation of Humanitarian Aid Actions Stipulated under Article 20 of Council Regulation (EC) No 1257/96 of 20.6.1996 – Third Phase – Synthesis - Final Report”. This states the following “Every major ECHO programme ought to be able to call upon or establish a permanent monitoring and evaluating capacity. This should go beyond, though may include, the monitoring and evaluation capacities of the ECHO funded agencies.”

In J.1.4, on p61 of the same document, the following is suggested: “It is recommended that for *all* ECHO funded projects, a set of core indicators be identified and presented in some form of *simplified project matrix*” (the italics are contained in the original quote).

The lack of overall objectives tends to lead to the implementation of projects on a piecemeal approach, based on the targets for the numbers of beneficiaries to be reached with water and sanitation initiatives, rather than achieving objectives of a more significant nature such as “durable improvements in the health of beneficiaries”.

In the interest of ensuring both efficiency and effectiveness, it is important that partners, who have access to detailed information, on the ground, are able to clearly quantify the level of effort and the expected achievements. It is felt that this is an important step to ensure that the achievements of individual partners can be quantified. As ECHO works with different NGOs, the sum of the individual efforts provides the global picture of what was achieved with the resources from each decision.

To sum up, the evaluator feels that the first and second decisions were an effective response to the immediate needs, which arose as a result of the effects of the hurricane. The third decision was very different as it incorporated elements of rehabilitation and required a more comprehensive project design methodology to respond the aforementioned characteristics.

Choice of Beneficiaries

The choice of beneficiaries, participation and other aspects are described in the plan. However the Global Plan falls short of detailing numbers of beneficiaries and describing the level assistance to be provided in each sector. It would have been a considerable improvement if the Global Plan had provided the necessary detail. Not only would it then be possible to evaluate the achievements of the Global Plan, based on more objective criteria, but the partners would also be able to design interventions and choose beneficiaries who respond more exactly to original criteria.

Deployed Strategy

The Global Plan relies on the co-operation of NGO partners to implement the different elements in each sector of activity. It should be noted at this stage that the “relevance of the objectives” is reflected in the proposals from each of the partners. The strategy, which was deployed, on the face of the analysis, responded clearly to the needs of the population. Nevertheless, the lack of criteria for the design, construction and implementation of drinking water and sanitation systems calls the strategy into question.

Specifically, ECHO acquired the services of European NGO's, who worked in co-ordination with local NGO's, to build the drinking water and sanitation systems. However, the evaluator found a large variation in the quality of both “hardware” and “software”⁵. An example of the former is a water intake formed by a transversal barrage on a small river that brought large amounts of sediments during the rainy season. On the day of the field visit, all the members of the village were involved in cleaning the sediment from the intake. The community members performed this task with monotonous regularity. The danger of the sediment entering the pipe network was very real as no sedimentation units or filters were installed.

Another example of deficient technical design was the construction of the latrines. The VIP (Ventilated Improved Pit) latrine is a proven technology that has been applied throughout the world. Nevertheless,

⁵ In this context the hardware is the water supply system itself, whereas the software refers to the community organization, O&M to keep the system operating in optimum conditions.

the evaluator did not see one latrine correctly installed in Nicaragua and an elevated proportion of incorrect installations in the other countries. Deficiencies were simple such as the ventilation tube of an inferior diameter, installed on the inside of the latrine, not painted black, or simply not installed.⁶

The limitations in the “software” consisted of deficiencies in the O&M which was evident throughout the region, in aspects ranging from the collection of user fees (to establish an operating reserve) through to the community organization to implement the O&M.

Variation in Technical Skills Deployed in the Field

A point relevant to the deployed strategy is the varying levels of technical skills encountered during the site visits. While visiting the different communities who participated in ECHO projects the tremendous dedication of the partners became evident. This dedication was manifested in various ways such as work in isolated communities that would not have been able to access to potable water systems or have adequate sanitation facilities in the near future had it not been for the ECHO supported assistance. However the corollary of the dedication is the level of technical standards encountered, which could have been improved in some instances.

The ECHO Global Plan of October 1999 has specified “objectives/type of aid” for individual partners. However the content of the “objectives/type of aid” can at best be considered as “results” or simply “activities”. The global plan does have a “methodological approach” but fails to encourage partners to assume stated objectives in their submissions. The result is a large variance in the objectives stated by each partner in their proposals. ECHO is not providing sufficient orientation to partners in various aspects, such as:

- 1) ECHO has not established clear objectives and results which are easily measurable and can be followed by the NGO's. The author is aware that there has been much discussion about whether the logical framework can be used for emergency interventions.
- 2) The standards, both in technical and the social areas, required for the construction of water and sanitation systems have not been clearly delineated to partners.

The effect of this difference in technical standards and techniques employed in the social area is a large variation in the satisfaction of needs. Some partners are able to construct durable systems, which respond to the needs of the affected population. Others have encountered simple difficulties in both the design and construction techniques. The impediments will have an effect on the ability of partners to meet the felt needs of different communities in a durable manner.

In one particular village (in Nicaragua) one and half-hours drive along a road, built by hand, 2 wells were built, with funding from ECHO. This was a community that very rarely received outside aid. The effect of the wells and the accompanying latrines was significant and the children at the school, the women (the secretary and treasurer of the water committee were women) and the men emphasised the benefit that the wells had brought to the village. In this village the deployed strategy of the provision of water and sanitation facilities has had a significant impact in satisfying needs. It is worth mentioning that the work through an NGO evidently facilitated the installation of water and sanitation systems that otherwise the community would not have had. On previous occasions the village in question had requested assistance to install a water supply system from other sources (such as government agencies) without receiving a positive response.

Field Visits and the Deployed Strategy⁷

⁶ The tube should be placed on the outside of the latrine, painted black, with a fly trap and, through convection, as it is heated by the sun, draw air up from the pit through the toilet bowl itself, thus ventilating the latrine.

⁷ It should be taken into account the consultants were not given enough details to plan site visits at random in the different countries of the region at the outset of the country visits. As a result the total impartiality of evaluation may have been affected. It should be noted that there is no reason to believe that the objectivity of the evaluation was indeed altered by the selection of communities to visit, which was kindly completed by ECHO staff in the region.

During the field visits a number of aspects were highlighted which directly reflect on the deployed strategy and demonstrated the need for improvement. The factors that are relevant in this context are given below:

- 1) The design of the drinking water systems was the result of work of the partner NGO technical team without effective participation from the village, in 10 out of 16 communities visited. Even in the villages visited where the community participated in the design, the participation did not include selection of alternative service levels with different associated contributions. Furthermore, the location of water taps was often decided by the NGO technical team and presented as a “fait accompli” to the village.
- 2) The drinking water and sanitation systems were not generally built in response to demand but rather perceived need (there are notable exceptions such as the case of the isolated community cited above). The perception about the need could have been (more often than not) that of an outsider rather than a community member.
- 3) The training of water committee members, organisation of O&M committees and essential follow-up requires a longer presence than that which ECHO currently assigns to project implementation.

In the experience of other water and sanitation programmes the durability of the system is directly related to the level of participation in design, construction, operation and maintenance.⁸ Again, the duration of ECHO projects does not permit adequate efforts to be dedicated to effective community participation during design and construction. The Global Plan allocates 16 MEURO for reconstruction and rehabilitation, of which approximately 7.75 MEURO⁹ was allocated to the water and sanitation sector. The level of expenditure represents a significant investment and there is a need to ensure that it is long lasting. This implies sufficient time should be allocated to project implementation to effectively develop the necessary community support mechanisms that will permit the water or sanitation systems to become durable investments. If the contrary were to occur, the investment of 7.75 MEURO may be partially wasted on spurious constructions of water and sanitation systems.

2.3 COORDINATION AND COHERENCE

After the havoc reeked by Hurricane Mitch in Central America, a number of donors intensified programmes in the Central American region.

2.3.1 USAID

In an interview with the USAID Nicaragua Reconstruction Programme Coordinator, Mr. Thomas Membreño, it was explained that USAID had a programme with the value of USD103 million for Nicaragua. Another USD283 million had been allocated to Honduras. The USAID programme worked with NGO's in the water and sanitation sector as they had a developed implementation capacity and were able offer transparency during execution of project activities.

In Nicaragua it should be noted that USAID was able to disseminate various documents that resumed the different types of assistance offered under “Hurricane Mitch Reconstruction” initiatives. It was evident that the issue of “visibility” had been addressed in a more effective manner by USAID than ECHO or the partners.

Mr. Membreño explained that coordination with ECHO funded programmes had been positive at both the local and donor level. He also indicated that the US government funding was subject to strict audit controls. He went on to explain that post-Mitch funding was being considered which would contribute to the long-term durability of rehabilitation efforts, as this was a real issue to be addressed.

⁸ The Global Study “Making Rural Water Supply Sustainable”, World Bank Water and Sanitation Programme, found that “sustainability was markedly higher in communities where household members made informed choices about whether to build a system and what type and which level of service they preferred”.

⁹ The figure of 7.75MEuro is an estimate based on the allocation of funding described in the Global Plan.

Mr Membreño said that coordination with other NGO's throughout the region was effective, particularly at the NGO-NGO level.

In general, the evaluator found a high level of coordination between the local authorities in the region and implementing NGO's financed from a variety of sources. Fortunately, this coordination did not usually result in the substitution of community managed O&M, which is an essential component of durable water and sanitation systems. The local authorities positively supported NGO initiatives in the water and sanitation sector.

2.3.2 World Bank

The World Bank, through the International Development Association (IDA) has supported short and medium-term rehabilitation, which included USD20,000,000 assistance for general rehabilitation of rural infrastructure in Nicaragua. Significant levels of assistance were also dedicated to other countries affected by "Mitch". In Nicaragua, FISE was the IDA counterpart and effectively coordinated implementation with other donors such as ECHO.

2.3.3 Other European Commission Services

"La Unidad de Reconstrucción del Proyecto ALA 86/20" in Honduras has reconstructed 311 water systems in the departments of "Francisco Morazan" and "El Paraiso" in the period 1999 to May 2000. Other figures are shown in the table below.

Table 3 The number of systems attended¹⁰ by ALA 86/20 in Honduras

System type Department	Water system reconstruction	Water system rehabilitation	Well repair & main. 1999	Well repair & main. 2000	TOTAL
El Paraiso	142	159	140	764	1205
Francisco Morazan	169	194	211	490	1064

NOTES: Rehabilitation: provisional repair
 Reconstruction: return a system to normal use after considerable damage
 Repair: repair "normal" damage to a system

The project ALA 86/20 made a significant contribution to the rehabilitation effort in 1999 and 2000 for Honduras. The author was not aware of other more significant contributions that were made to the rehabilitation. During the visit to NGO's no valid information was available on the coordination between ALA 86/20 and other EU programmes.

2.3.4 PRRAC

The PRRAC project represents a regional initiative, financed by the EU to assist in the rehabilitation and reconstruction of Central America, in response to the destruction caused by Hurricane Mitch. From the information provided to the evaluation team it was indicated that Euro26,000,000 will be invested in the water and sanitation sector throughout the region. The total investment in all sectors will be Euro119,000,000. The project will be implemented over a period of 4 years, 6 months preparation, 3 years implementation and 6 months closedown. There are different executing agencies in each country for the region.

PRRAC is proposing a tariff policy which includes O&M cost recovery so it is essential to closely coordinate between PRRAC and ECHO. The purpose should be to ensure that differences in implementation techniques do not exist that might affect the willingness of a community to work with ECHO or PRRAC in the future. It is generally not practical to follow uniform policies in the area of tariffs as each project has different priorities, nevertheless ECHO and PRRAC, both funded by the EU should

¹⁰ This information is quoted from the January 1999 to May 2000 activity report for ALA86/20. Unfortunately the financial report does not show any units and is therefore not quoted. The author has not been able to crosscheck this information with other sources.

be in a position to adopt coordinated practices. Similarly it is important to ensure that projects place similar emphasis on forming and training water and sanitation user committees.

2.4 EFFECTIVENESS

2.4.1 A Qualitative Analysis

The systems visited in the four countries were, on the whole constructed to good standards, although specific shortcomings did exist, as mentioned earlier. The technical quality of a water or sanitation system evidently affects the effectiveness of an investment made by ECHO. Although overall it is felt that technical shortcomings were not a major problem, specific projects did suffer from limitations, which are described in the appropriate text.

The environmental problems mentioned earlier could have a major impact and reduce the effectiveness of the systems in the future.

The need for adequate training and organization to guarantee the long-term effectiveness of the water and sanitation installations has already been mentioned.

2.5 COST EFFECTIVENESS – an Explanatory Note

The information provided to the consultant covered the costs for investment and operational costs for a selection of individual NGO's in the water and sanitation sector. However, it is understood that this is an evaluation of the work of ECHO, not of the NGO's. The consultant was unable to conclude the quantitative analysis of the work of ECHO as adequate financial reports were not available, particularly at the level of global assistance. It would have been perfectly possible to conduct the analysis for a number of individual NGO's but this was not required in the Terms of Reference.

2.6 EFFICIENCY

It is important to stress that, in contact with the implementing partners, it became evident that the participation of NGO's had a positive impact on the implementation of the Global Plan.

2.6.1 Planning and Mobilization of Aid

During the evaluation it was clear that the use of NGO's as the implementing entities for the ECHO programmes was an efficient method of mobilizing aid quickly at a minimum cost. The international NGO's had different relationships with local partners, but as the analysis of this ECHO programme progressed it became evident that the superior knowledge of the local NGO's was a positive factor in programme implementation.

As far as the evaluator was able to ascertain, the European representatives of the international NGO's did not cause any delays in disbursement of resources. On the contrary the disbursement of funds from Europe was agile. Similarly the NGO's showed a high level of skills in the movement of inputs required for the individual interventions. In a similar manner, ECHO proved to be a responsible and agile partner, mobilizing funds without delay.

2.6.2 Operational Capacities and Other Points

The NGO's who were operating as partners in this particular programme of humanitarian assistance (at least those interviewed) all had significant experience and demonstrated a developed degree of management, operational and administrative skills.

In the field of emergency operations coordination with local governments is essential, especially as the temporary nature of emergency and rehabilitation projects implies the need for a source of local information.

The selection of recipients responded to the description contained in the Global Plan for the partners visited during this evaluation. In general it was possible to note an increase in the number of beneficiaries from that originally proposed. This was the result of changes in the characteristics of the recipient community which were not anticipated when the project was designed. It is worth emphasizing that the increase in the number of beneficiaries occurred at no extra cost to ECHO.

The information obtained by the evaluator suggested that the purchase and use of commodities for the programme was implemented according to established ECHO practices.

2.6.3 Strategies Deployed

The implementation of the Global Plan with the cooperation of local and European NGO's undoubtedly encouraged the rapid mobilization of resources at a low cost to build water and sanitation systems. However, some of the NGO's are also subject to limitations, such as those in the technical field. On the other hand NGO's have shown themselves to be agile implementation agencies – which is an important factor when responding to a disaster. In conclusion, it is felt that the rapid response to meet specific objectives in the water and sanitation sector, in response to an emergency could only be achieved through the work with NGO's.

2.6.4 Systems of Control and Auto-Evaluation

The deficiencies in the design, such as the lack of indicators or objectives, of the ECHO proposal have already been highlighted. If the systems of control set up by partners show any weaknesses then it is, to a large extent, due to the limited design of the global plan. At this stage it must be stressed that the design of the global plan is evidently more complete than that of the first and second decisions. However, it is important for ECHO to establish guidelines to outline the internal administrative and organizational information needs required for monitoring and evaluation. This would permit partners to clearly establish monitoring and reporting mechanisms that should be implemented, in order to meet ECHO reporting and control standards.

2.7 VIABILITY OF GLOBAL PLANS

Viability implies an analysis of the strategy, objectives and indicators. The absence of objectives and indicators has already been highlighted. Additional relevant points are detailed in the following text:

2.7.1 Vulnerable Groups

In water and sanitation, the initiative has to be targeted to communities, which necessarily includes the better off and the not so well off. It is felt that the interventions in the sector of water and sanitation really helped the vulnerable groups, by providing essential services to communities affected by the Hurricane. However, the assistance was not exclusive to those groups.

2.7.2 Participation of Stakeholders

During the evaluation an emphasis on the participation of women was not evident, except in isolated cases. This was particularly true of water committees that were often dominated by men.

2.7.3 Disaster Preparedness

It is felt that the partners would require further guidelines about which interventions would be appropriate in the field of disaster preparedness. This observation is made in the light of the imminent implementation of the DIPECHO initiative.

2.7.4 LRRD (Linking Relief to Rehabilitation and Development)

The concept of development is clearly understood by the NGO partners. Nevertheless, the very short-term nature of the ECHO interventions has made the incorporation of rehabilitation and development foci in the Global Plan rather limited. The consultant is of the opinion that ECHO should take different

initiatives in this field to build on the emergency and rehabilitation work that has been successfully completed. The links could be forged based upon the following initiatives (among others):

Orient other EU projects in the region to assume essential tasks, which would contribute to the achievement of durable operation and maintenance.

Further encourage initiatives already undertaken to leverage resources (other than those of ECHO) to undertake more developmental initiatives, based on the work completed by ECHO.

Establish durable and concrete links with national and local governments, which would build on the relief and rehabilitation initiatives undertaken by ECHO financed NGO's.

2.7.5 Environmental Protection

The issue of environmental protection in Central America and the relationship between the poor environmental management and the effects of Hurricane Mitch has already been raised. The best insurance against future disasters should be positive environmental management practices.

2.8 VISIBILITY

During the evaluation and associated discussions with community members it became evident that visibility should not be limited to T-shirts, signs and caps. The more fundamental issue of who is ECHO, how does the support get to the communities and what are the objectives of ECHO remain on the sidelines.

The strategic guidelines state in the paragraph on visibility (section 1): "Visibility is not limited to stickers". It is felt that insufficient emphasis was placed on this particular aspect of the strategic guidelines.

The solution is to change the emphasis from a passive approach to visibility to actively promoting an understanding of the programme, the strategy, objectives, sources of finance and origin of the finance. A suitable methodology would be the use of "community workshops" and "radio spots" to focus attention on the ECHO programme.

2.9 GENDER ISSUES

The role of both women and men in the ECHO initiatives requires deeper analysis than that which can be afforded in this short evaluation. Nevertheless it is evident that the responsibilities of both sexes are not fairly distributed in the water and sanitation sector.

In the words of the World Bank Water and Sanitation Programme "water and sanitation services improve the quality of lives of the poor only when they are both effectively sustained and effectively used by all sections of communities." The World Bank also points out that "since demand-responsive approaches are now known to enhance the sustainability of project interventions, it is important for sector agencies to understand whose demand is being expressed and addressed: those only of the men in the community, or those also of the women - who tend to be less vocal and less publicly articulate?" It is felt that it would be worthwhile building on the experience of other agencies (in this case the World Bank water and sanitation programme). ECHO should ensure that a demand responsive and gender sensitive approach to project implementation is effectively incorporated in the short project implementation time frame within ECHO's mandate.

The most striking discriminatory point is the generally accepted role of women in the home right from the cook through to the member of the family responsible for collecting the water. In the field visits and analysis of the work of each NGO partner, only superficial initiatives were evident in the field of gender. The potential negative effects caused by not taking into account the factors mentioned in the preceding paragraphs were evident during the field visits.

3. A POSSIBLE EXIT STRATEGY

The role of ECHO obviously needs to have a finite end in the field of water and sanitation. In this sense ECHO should adopt an exit strategy, which reflects the short-term nature of emergency and rehabilitation interventions. The need to ensure durable investments in the water and sanitation sector should also be considered in the exit strategy.

The first step is to ascertain the extent to which any existing ECHO water and sanitation projects still are under implementation and in what programmatic areas. Based on this knowledge (to be provided by the partners), ECHO can establish an effective timetable for the reduction of assistance in the region to zero. The timetable for the departure from the region should take into account any current DIPECHO initiatives and be elaborated in close coordination with the partners. There is no substitute for incorporating the partners in the design of the exit strategy – as real partners they should participate in the decision and would therefore be in agreement with the resolutions adopted. It is strongly suggested that ECHO organize a short planning workshop, with full participation of the partners in the region to design an exit strategy. The partners would then have effectively contributed to the design and would adopt the decisions as their own. Implementation of the decisions adopted by ECHO and the partners would therefore not be a contentious issue.

Clear objectives and a time frame for the strategy could be agreed at the workshop that should count on skilful facilitators to ensure that specific workshop objectives are met. It would also be important to develop a workshop methodology that guarantees the full participation of the partners. To this end it is recommended that the methodology of “plenary-small groups-plenary” be adopted which effectively stimulates a maximum contribution from the participants.

The detailed content of the strategy should be elaborated at the workshop. Nevertheless the consultant offers an outline of a potential exit strategy:

1. Intensify DIPECHO initiatives and agree on a finite time frame for their implementation.
2. Define any activities required that are complementary to current water and sanitation projects financed by ECHO (such as community education, organization or environmental protection). These would probably be financed by non-ECHO resources.
3. Identify potential resources to implement the complementary activities and design a timeframe for project implementation.
4. Identify the role of partners and other collaborating agencies to ensure that the required complementary activities are implemented and monitored as required. It would be important, at a later stage, to obtain the agreement of partners and collaborating agencies to assign the required resources for the planned complementary activities. During the workshop the level of resources required should be estimated and the agreement, in principle, from the partners should be forthcoming.
5. The role of other EU financed projects (such as PRRAC) should be defined in the workshop. Hopefully it would be possible to count on the participation of PRRAC representatives at the workshop.
6. It would be important to ensure the full agreement of all interested parties on the implementation of the strategy.
7. As a final step it would be necessary to elaborate the detailed timetable for the departure of ECHO from initiatives in the field of water and sanitation in the region. In the timetable it would be important to assign responsibilities of both ECHO and the partners for the implementation of individual activities as part of the exit strategy.

3.1 THE FUTURE OF ECHO IN THE REGION

In the water and sanitation sector the ECHO assistance has been very effective. Needs undoubtedly still exist but there are two foci:

- The need for interventions that have more of a “development” rather than an emergency focus.
- The continuous emphasis on an immediate response, in the field of water and sanitation, to disasters that frequently occur, due to the high potential of future negative events in the region.

It is therefore suggested that ECHO maintain a presence in Central America, for water and sanitation projects, with the capacity to respond to the regular disasters that occur in the region. The characteristics of ECHO assistance, in the field of water and sanitation, should ideally follow the recommendations outlined in the appropriate section of this report. It is evidently necessary to balance the demand for durable water and sanitation systems against the need to fully respect the ECHO mandate of emergency assistance.

3.2 ACTIONS TO HAND OVER TO PRRAC

The provision of durable water and sanitation systems is evidently an area where a project such as PRRAC will play an important role. ECHO, through the Mitch interventions and others in the region, has acquired important on-the-ground knowledge. PRRAC in the four countries (Honduras, El Salvador, Guatemala and Nicaragua) should build on the specific knowledge gained by implementing partners and the ECHO field representatives in the region when implementing water and sanitation projects.

PRRAC is primarily a development project and the provision of durable water supply is clearly stated in the objectives. Therefore, it would be important for PRRAC to make full use of the specific knowledge of projects and methodologies that the ECHO implementing partners have acquired in the region. Accordingly, ECHO and PRRAC should coordinate closely about the provision of water and sanitation services to those stakeholders where ECHO has had the greatest impact – rural communities.

4. CONCLUSIONS

The following conclusions refer to the three different decisions

1. Specifically for the water and sanitation sector ECHO should recognize that the quality of the investment is directly proportional to the time allocated to construction, community education and organization. A significant effort is needed in these latter fields to ensure that systems are durable, long lasting and cost effective.
2. Despite the imperative need for an improvement in the environmental management of watersheds, the “Strategic Guidelines for ECHO’s action on Central America following Hurricane Mitch” makes no more than a passing mention reference to the theme of improved environmental management.
3. There is a significant variation in the skills vested in the community water committees between different partners. Individual NGO’s have all highlighted the need to provide adequate training for the water committees.
4. The period of time allocated to the implementation of the ECHO projects in the field of water and sanitation does not allow sufficient effort to be dedicated to the training of water committees nor stakeholders.
5. As indicated in the section on local capacity building, some partners may not dedicate sufficient time for the training of stakeholders in all the areas required. Training in preparation, mitigation and prevention of disasters is no exception.
6. The implementation of physical measures for water source protection is also an area that may be required to conserve water sources.

7. In immediate post-emergency situations ECHO is not in a position to accurately quantify the levels of assistance needed by the affected population. Nevertheless the NGO partners, particularly those who already have a presence in the area, are among the best informed entities in the disaster affected region. It is to be assumed that the partners are able to quantify expected results in terms that go beyond simple monetary expenditure.
8. The issue of gender, in a demand responsive environment is not given sufficient emphasis. Partners tend to gloss over the important issues associated with the role of women in a durable project that meet felt the needs of both genders in the community.
9. The intervention of ECHO was a clear response to the immediate, perceived, needs of the affected population.
10. As neither the first and second decisions included objectives or indicators, it is not possible to evaluate the relevance of objectives in any great depth.
11. In the interest of ensuring both efficiency and effectiveness, it is important that partners, who have access to detailed information, on the ground, are able to clearly quantify the level of effort and the expected achievements. It is felt that this is an important step to ensure that the achievements of individual partners can be quantified. As ECHO works with partners, the sum of the individual efforts provides the global picture of what was achieved with the resources from each decision.
12. Technical shortcomings in construction caused a reduction in the effectiveness of the assistance in some cases.
13. The effectiveness of water installations could possibly be reduced by environmental damage in the watersheds that supply the drinking water systems due to the reduced flow of water at the sources used by each system.
14. It is felt that insufficient emphasis was placed on deepening the issue of visibility beyond stickers, tee shirts, caps and signs, despite a clear recommendation to this effect in the strategic guidelines.
15. The presence of the ECHO representatives in the region was obviously very opportune and useful for the implementing partners. Nevertheless it is felt that the design of the decisions did not facilitate adequate monitoring and evaluation of the projects, which were implemented.
16. Evidently to role of NGO's is a key factor in ensuring a rapid response in a disaster situation, but there are varying technical, managerial and administrative standards among partners. ECHO should develop training initiatives in key areas to ensure that NGO's are really effective partners.
17. The role of ECHO in relation to the partners could be strengthened to ensure that the NGO's are true partners. For example the NGO's have a wealth of local knowledge that would be a useful input to the design of future emergency interventions and the subsequent monitoring and evaluation during or after implementation.

5. RECOMMENDATIONS

The following recommendations are a direct result of the analysis raised in the text of this evaluation:

1. It is essential to develop an implementation model that encourages long term durability while meeting the needs of the population in the emergency or post-emergency situation. In this sense, the following elements should be included:
 - 1.1 Self-help or skilled labour from the village
 - 1.2 Widespread community education and organisation
 - 1.3 Participation of women at all levels of project implementation
 - 1.4 The application of community management principles from the day of initial contact with the community through to the installation or handover of the system to the community and subsequent O&M.
2. It is felt that an ECHO supported component of environmental management is needed, linked to the water and sanitation programme, in environmentally fragile areas such as Central America. This should be especially directed at the river basins that form recharge areas for the aquifers and watersheds that supply the water for the drinking water systems.

3. ECHO should analyse the immediate need for both emergency tanks, which are only temporary and expensive solutions to water supply and the very real requirement in the aftermath of an emergency for the rehabilitation of investments in the provision of essential water supply and sanitation services. Both forms are equally valid and provide essential services.
4. The training of water committee members in the O&M of systems should be given the highest priority, to ensure that significant investments in the sector are durable and respond to the felt needs of stakeholders over the long term. Similarly, stakeholders should be afforded the sufficient education to achieve changes in the customs and habits related to water use and sanitation, which will result in longer-term benefits in health, as well as freeing up time for productive activities.
5. The orientation of water and sanitation projects should be developed such that sufficient resources can be dedicated to the preparation of communities to face and take measures to mitigate the effects of potential disasters. This necessarily includes increasing the length of time dedicated to project implementation.
6. Partners should assist ECHO improve the description of relevant objectives by clearly quantifying levels of effort and the results expected from an intervention. ECHO should consolidate the results, allocation of expenditure and actual expenditure for given periods that would permit more detailed regular monitoring and analysis of achievements. The quantification of expected results would also be needed to allow sufficient in depth analysis of the efficiency and effectiveness of each individual intervention.
7. It is recognised that the development of objectives and indicators for emergency projects is not an easy task given the short notice that is generally available to design the initiative. Nevertheless, from the previous point it is clear that indicators and objectives should form an integral part of an ECHO emergency proposal.
8. ECHO should allocate and finance a minimum period for individual water and sanitation project implementation that should not be less than 6 months.
9. ECHO guidelines for project implementation should be elaborated, which not only include construction standards but also the desirable requirements for community education, organization, operation and maintenance.
10. ECHO finance for systems (water and sanitation) should include the necessary resources to implement required community organization and education. Implementing partners must develop the capacity to undertake education, awareness raising and community organization parallel to system construction activity.
11. Further contact should be established to permit close coordination between projects like ALA86/20 and any future ECHO rehabilitation initiatives in the water and sanitation sector in Honduras (or other countries should similar projects exist).
12. It is important to ensure that close coordination on choice of beneficiaries, community contributions, O&M costs and cost recovery is implemented between ECHO and PRRAC.
13. The partners should accompany the physical construction measures with educational and organizational initiatives to support the most vulnerable groups, particularly women.
14. The concept of disaster preparedness should be emphasised among partners to such an extent that it should become a routine component of any ECHO (or for that matter NGO) intervention in the region.
15. ECHO should take advantage of the positive relationship with NGO's to further deepen their understanding of the link between relief, rehabilitation and development.
16. ECHO should encourage environmental management as one of the most effective disaster prevention measures for Central America.
17. Partners should be encouraged to broaden the issue of visibility beyond a simplistic approach of maximum coverage for the word "ECHO". The concept should include community "spots" or very short workshops to explain ECHO based on maps, photographs and other appropriate didactical instruments. This recommendation builds on the text of the strategic guidelines.
18. ECHO partners should be encouraged to adopt a more vigorous approach to implement actions in the field of gender, to reduce the effective discrimination against women – with actions directed at both men and women. The partners should take specific steps to foster the participation of women at all levels of project implementation.

19. ECHO should ensure that a demand responsive and gender sensitive approach to project implementation is effectively incorporated in the short project implementation time frame within ECHO's mandate.
20. The effective provision of drinking water requires sustained chlorination. Sufficient community education and organization initiatives should be directed to achieving regular treatment of the water supply with chlorine.
21. It is important for ECHO to establish guidelines to outline the internal administrative and organizational information needs required. This would permit partners to clearly establish monitoring and reporting mechanisms that should be implemented, in order to meet ECHO reporting and control standards.
22. ECHO should encourage the development of a more effective partnership with the NGO's to gain maximum benefit from the comparative advantage that each entity has on the ground in the region.
23. PRRAC should build on the specific knowledge gained by implementing partners and the ECHO field representatives in the region when implementing water and sanitation projects.
24. ECHO and PRRAC should coordinate closely about the provision of water and sanitation services to those stakeholders where ECHO has had the greatest impact – rural communities.

6. LESSONS LEARNED

This particular evaluation of the ECHO's aid to the victims of Hurricane Mitch draws on both extensive field work (information collected from interviews in 16 communities) and analysis of the programme with 10 implementing partners. The lessons learned are a reflection of the analysis that followed this work in the field. It is felt that this section is not an academic exercise but a practical reflection of the positive work of the implementing NGO's and the concerns of stakeholders at different levels. It represents a concrete desire amongst the partners and stakeholders to achieve measurable improvements in programme implementation.

1. The implementing partners require coherent guidelines and orientation from ECHO in both the technical and social fields which would provide them with the information required to implement top quality programmes. This would ensure that the standard of work in both fields is maintained at a high level.
2. It is recommended that the design of emergency programmes be undertaken in close co-ordination with the NGO partners to ensure that the maximum use is made of their evident on-the-ground knowledge.
3. The design of emergency programmes requires an investment of effort to allow sufficient orientation to be given to adequate objectives and indicators, which can guide the implementation initiatives of ECHO and partners.
4. It is important to not cause confusion between stakeholders about the role of different EU bodies. Therefore the dissemination of the need for different implementation approaches should be explained to the stakeholders.
5. The achievement of durable water and sanitation systems implies a significant investment in time and resources for community education and organisation to ensure that the intended level of service is provided on a constant basis.
6. The most appropriate method to operate and maintain village level water and sanitation systems is adopting a community management focus from the first day of contact with the community. In general, it is evident that local governments and water authorities in the countries of Central America do not have sufficient resources to operate and maintain the community systems. The partners and ECHO should build on the positive experience of other programmes, such as the World Bank Water and Sanitation Programme¹¹

¹¹ The World Bank Water and Sanitation Programme has a useful web site at <http://www.worldbank.org/html/fpd/water/>.

7. The importance of the role of community education and organisation is not to be underestimated. The investment in this field requires time, beyond the period normally allocated to implement ECHO emergency projects. Nevertheless, ECHO should adopt an orientation that permits the development of these important activities, which are essential ancillary elements to the water and sanitation system construction itself. The length of time allocated to the implementation of complete water and sanitation projects is necessarily longer than the time traditionally destined to ECHO emergency projects.
8. NGO's have proved to be flexible and efficient implementation partners, which are the principle characteristics required at the time, or in the immediate aftermath, of an emergency. Nevertheless, it is evident that the work in the field of disaster preparedness requires an investment of effort that goes beyond the short- term perspective of emergency assistance. Similarly, durable drinking water and sanitation installations should be considered in the same light.
9. The environment is probably the single most important issue to be addressed in Central America at present. The initiatives of DIPECHO and ECHO in the field of disaster prevention are an effective complement to current emergency programmes. Nevertheless, it must be taken into account that disasters in Central America, such as the effect of Hurricane Mitch, will worsen unless measures are taken to mitigate the negative effects of extensive environmental mismanagement in the region.
10. Initiatives in the field of environmental management are of paramount importance to ensure that water sources are not negatively affected by deforestation that causes changes in the reflectivity of the land surface or reduction in the infiltration rates of water to the sub-soil.
11. The issue of visibility goes beyond posters, caps, tee shirts and flyers. It is essential to ensure that stakeholders are fully aware of who is ECHO, the source of funding and the perceived objectives of a given emergency programme. Therefore, partners and ECHO are well advised to consider widening the scope of initiatives beyond the field of simple caps, signs and tee-shirts to include significant initiatives to interchange information about ECHO with the stakeholder communities. It is important to change the emphasis of visibility from one of being seen to being understood.
12. NGO's should be considered as real partners to ECHO who can offer significant on-the-ground knowledge and specific project implementation skills, which are very useful in emergency and rehabilitation situations.