Project Appraisal Report

Latin American Network for an Environmentally Acceptable Waste Management

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Comprehensive Appraisal Report
with special reference on the institutional, economic and financial aspects of the network

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# Project Appraisal

Latin American Network for an Environmentally Acceptable Waste Management

**Comprehensive Appraisal Report**
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**Appendix I:** Documents of the comprehensive appraisal report

**Appendix II:** Specific appraisal reports
1. EXECUTIVE SUMMARY OF THE PROPOSAL AND THE GERMAN CONTRIBUTION

The project "Latin American Network for an Environmentally Acceptable Waste Management" aims at the strengthening of already existing activities and institutions different in origin, professional task, and legal constitution, but strongly committed to waste management by coordinating their resources.

This means to support a cooperation process to exchange, disseminate and develop know-how and expertise in waste management and environmental protection. This process has to be supported by external financial and human resources for about eight to ten years. In Phase I of two years the priorities will be:

- strengthening the coordinating process,
- starting pilot project to develop appropriate technologies,
- organizing the information, training and dissemination process, and
- presenting the network and first results to funders and clients.

The German contribution to this network will be mainly:

- the delegation of short-term experts for carrying out pilot projects, training courses and seminars, and strengthening the network structure on different levels,
- travelling cost, allowances, and information material in support of interregional communication.

There will be also the need for the provision of equipment on the project level as well as for the physical support structure of the network.

In Phase I (two years) of a project period of eight to ten years, the German contribution will be DM 1,990,500, to support the specified activities and in addition 182.5 expert-months to carry out these activities. 142 expert-months will be for local, and 40.5 for foreign professionals.

2. TARGET AND JUSTIFICATION OF THE PROPOSAL

2.1 Problem analysis

As described in other documents related to this project, countries in Latin America and the Caribbean are undergoing rapid and complex development coupled in many places with the full range of environmental problems. Solutions have to be found and implemented quickly, which accommodate economic development on one hand and protect the one and only environment we have on the other.

Despite all differences in size, climate, access of natural resources, social and political systems, and patterns of development in the Region, there seems to be a growing readiness of national and regional authorities and institutions in both public and private context to take also environmental aspects into consideration related to the decision making process. Also, funding agencies, foundations and other donors are willing to admit the need of strengthening and coordinating efforts to come to an environmentally acceptable management of resources in the foreseeable future.
But due to the complexity of the subject itself, not only related to clean water and good sanitation facilities but also to urban air pollution, coastal marine pollution, toxic chemicals in waste of any consistency and above all the increasing risks for any living creature, the importance of coordination and cooperation on an intersectoral, as well as an interregional level has to be recognized.

The limited resources, the complexity of the subject, the interdependencies in the Region, and the challenge for the public as well as for the private sector, make it obvious to concentrate the efforts in the field of environment protection.

In the field of environmentally acceptable waste management, which means in our context minimization, recycling, collection, transportation and disposal, there are regional centers with specific tasks, there are contacts on university level, some industries have developed their own bodies to solve their very special waste problems. There are municipal authorities confronted with practical and urgent needs, whole communities are living on and from waste in Latin America and the Caribbean.

In this situation, there is no other way than to support the implementation of solutions executed by national or communal bodies and industries, via coordinating resources, disseminating experiences, formulating priorities related to the existing risks, and developing appropriate technologies in accordance with accessible financial and manpower resources. There is a lack in systematic exchange of experiences and know-how in the field of waste management in Latin America and the Caribbean.

This general deficit can be specified and the different aspects of the problems can be structured as follows:

- There is a lack of public and political awareness about the needs, instruments and benefits of environmentally acceptable waste management in the Region.
- There is no systematic identification, dissemination and access to/of relevant experience and know-how.
- There is no working exchange mechanism for interested institutions, groups and authorities involved in the subject on different levels and contexts.
- There is no recognized coordinating unit in the Region.
2.2 Objective, target groups and development aspects

As a contribution to serve the overall goal of protecting the environment against deterioration by man-made factors, one central objective is to integrate and coordinate the Pan American efforts of obtaining an appropriate waste management which will contribute to improve the living standard and the quality of life in this Region. To institutionalize the exchange, dissemination and development of experiences and know-how, in order to implement appropriate technical solutions in the Region, can be formulated as the objective of the project.

It has to be stressed that this does not mean another supercentralized institution or a central research institute. Implementation of approved and appropriate technologies in the field of waste management is the motivation of the network activities.

The network itself is a working context of partners equal in regard and authority, but different in origin, task and legal constitution with the commitment:

- To promote the awareness about the importance of environmentally acceptable waste management on all levels.
- To produce and exchange technical and economic experiences within the network and to disseminate these results in an adequate form to interested parties.
- To mobilize and coordinate financial, technical and human resources in the Region.
- To organize the communication and cooperation process within the network as well as with particular users outside the network.

The target groups of the project can be described as follows:

- Institutions for applied research in the field of waste management on national and regional level in the governmental and non-governmental sector.
- Authorities interested and involved in the implementation of environmentally acceptable technologies of waste management on the national and communal level.
- Associations of industries and chambers of commerce confronted with the need of environmentally acceptable and economically viable waste management.
- Professional federations interested in exchange of experiences, upgrading and training in the field of applied technologies.
- Regional subdivisions of international organizations interested in the dissemination of experience and know-how.
These quite heterogeneous target groups should form the working context of the network, not only in order to cooperate and exchange experiences, but also to present the results to a broader range of interested partners, institutions and authorities on the national or even communal level, which might be interested in a very particular subject.

To realize a link between participating members of the network and the final user of an applied technology is the main task of the project. To mobilize the public on all levels and to create political pressure, it is by far not enough to talk about the danger of environmental deterioration, but also to offer solutions. These solutions have to be presented, but in some areas they are nonexistent, in other ones they have to be adapted, in some they only have to be transferred. Quite obviously, this is a multi-disciplinary challenge to the traditionally structured academic professional and political scene. Engineers, economists, biologists, chemists, communication experts—and these are only a few of the requested professions—with different backgrounds and various experience have to get together not only to add up their capacities, but to multiply them. It is understood that this is not an easy task.

In this document, the justification of the network proposal under development aspects has not to be described in more details.

3. **DESIGN OF THE PROPOSAL**

3.1 **Previous activities and context to other proposals**

The growing number of project applications in the field of waste management on the national as well as on the regional level is one indicator for the readiness to deal with the problem on the side of the responsible bodies in the Region, as well as on the donor side.

Only within the German Technical Cooperation there is an urgent need to coordinate the different activities on national and regional level in the field of environment protection, health care, etc.

The ongoing projects with CEPAL, CEPIS, ECO, ICAITI, etc. on the regional level as well as with ESMEL, CAPRE, CETSEL, etc. on the national level, are only a few examples for the current activities in supporting the existing initiatives and organization by German aid. Through PAHO alone, German aid was channelled into 20 projects in 1988/89.

Details about current activities can be found in the offer by GTZ for this project appraisal, the terms of the consultants (appendix II/2) and the Financial Report of the Director, PAHO (see appendix I/1).

The design of the project "Latin American Network" has to make sure that bilateral activities on the level of investment in infrastructure and technical cooperation are supported as a matter that still has to be managed on national level. Via the resources of the network, such bilateral projects can be initiated and substantially prepared.
There is also no intention to duplicate activities of already existing bodies but to fill blanks within the given picture. Such a blank is for sure the stimulation and promotion of private initiatives in the field of application of waste management, as well as in the field of funding. General statements like these need to be specified, in particular regarding the field of waste management. This has been done in context with the later discussed pilot projects.

No "super organization" is on the agenda but the principle of subsidiarity and openness to a wide range of cooperation forms, has to be the guideline for coordinated activities within the network.

3.2 Activities and results

3.2.1 Results

As far as activities and results are concerned, there has to be a differentiation between those results expected as a general outcome once the project is well established, and those expected in the initial Phase I of two years.

The overall results can be structured into three groups:

- the content of the network,
- the resources and facilities, and
- the institutional/organizational structure

Referring to the first point (content), participants of two ZOPPs in Lima agreed upon results like:

- priorities and a working plan (E3),
- pilot projects (E7), and
- dissemination on a scientific, application oriented and educational level (E8).

Referring to resources, there have to be results like:

- qualified manpower capacity (E5),
- mobilization of funds and contributions (E6), and
- a working regional data bank (E4).

To keep the network going, there have to be results like:

- working cooperating centers in each country (E2), and
- a working coordinating unit (E1).

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1) E1 to E8 are results defined at the two ZOPP-Seminars in Lima from 16 to 21 July and 23 to 28 July 1990. There will be a separate ZOPP-Report distributed to all participants, which is under preparation.
These results should not only be seen in relation to the public sector. Strengthening of non-government activities and organizations in the field of waste management via the network is a further result of this project.

3.2.2 Activities

To achieve these results, the following activities are proposed and specified in the experts reports, enclosed to this comprehensive appraisal report. Further specification will be part of the activities within the network structure itself.

3.2.2.1 Development and dissemination of know-how

The priorities and a working plan of the network as a result will be generally based on the following activities:

- investigations about the regional and national needs which will determine the working priorities,
- evaluation of needs and capacities required by the network partners,
- coordination of the working plan referring to responsibilities for carrying out the activities on different levels,
- permanent monitoring for progress control and support activities, and
- evaluation of activities according to the priorities of the working plan.

These activities have to be carried out by the members of the network, and will find its correspondence in the pilot projects as well as in the information package. Obviously, there has to be a coordinating unit to initiate the activities and to function as a follow up and control institution in the whole matter.

Pilot projects as a specified result within the working plan have to be seen in the context of the following activities:

- identifying and establishing the preconditions for such projects in priority areas,
- identifying actual and potential users and demand for appropriate technologies and systems,
- working out guidelines for presentation of projects to be taken into consideration as pilot projects,
- preparing an evaluation and selection system for projects on national and regional level,
- identifying already available or potential funds for each selected project,
- evaluating and recommending project proposals to be carried out by different partners of the network on national or regional level,

- elaboration and implementation of support and follow-up structures for current or expiring programs of the network members,

- stimulating the creation of investment projects based on pilot projects,

- stimulating the launch of bilateral technical cooperation based on pilot projects, and

- systematizing and publishing project results.

To get results in the field of dissemination of experience and know-how in the field of environmentally acceptable waste management as an activity, it is necessary to support the communication process by:

- publishing a newsletter about the network activities,

- supporting publications referring to the subject on national and regional level,

- inviting potential users and decision-makers for presentations,

- strengthening the abilities and supporting opportunities to participate in the exchange of experiences and know-how on a global level.

According to all experience, it is already obvious now that these results and the corresponding activities can be realized only in a project of about 8 to 10 years. In order to make the project manageable, it should be structured in phases of two years each. The results and activities should be planned in these biannual steps.

Within this project appraisal, we are talking about the design of the whole project, but regarding results and activities we are concentrating on Phase I.

In Phase I the priority activities as far as working plan, pilot projects and communication are concerned will be:

- strengthening the coordinating process,

- starting pilot projects, and

- presenting the network and first results.

Strengthening the coordinating process will take place via a working coordinating unit, based on an initial working plan. This initial working plan has to be agreed in a meeting to which all potential partners of the network will be invited by the coordinating unit. After the project really starts, those institutional partners which are willing to participate in the network, should sign a letter of intent as a base for their mutual commitment.
Starting the pilot projects described as part of this project appraisal in order to develop and systematize appropriate technologies and know-how, is the base of further activities within the network, as well as towards new partners. There are projects aiming at technical aspects of waste management as well as on creating new projects and disseminating results and experiences. The pilot projects are based on the results of working groups of the two ZOPPs in Lima (July, 1990) and independent applications of different institutions. Different sectors with very heterogeneous technologies and different institutions are involved, the distribution of projects covers several countries and types of results. Nevertheless, it has to be said that a detailed layout for each project has not been elaborated so far. This is part of the project itself supported by foreign and local experts.

All pilot projects put their emphasis on the mobilization of local resources either through funds for local consultants or support for local equipment and support for presentation, dissemination, etc.

The foreign expert pool consists of short-term experts who will support a specially defined part of each project to upgrade the level of experience in the long run, or the network structure in general terms.

Finally, the local contribution to most of the projects has to be mentioned as an indicator of the willingness of the participating centers to support the network within the limited resources.

There were more proposals for pilot projects than finally put into the project appraisal. Those eliminated from the list were either duplications, technically not feasible at this stage of the network, or of such a complexity that specified pre-projects were designed to be carried out.

Especially within the study and seminar projects, new project ideas can be included so that the procedure of creating pilot projects will become a current process within the network.

Presenting the network the first results needs particular target group oriented forms of presentation and communication. As far as the network itself is concerned, a newsletter will be issued through the coordinating unit. In this newsletter, the members of the network are presenting their work and other interesting background information in their field. Each member is committed to contribute short news items.

The newsletter will be distributed to persons and institutions interested in the environment subject. Other forms of presentation should be taken into consideration as well.

In the second half of Phase I there will be a presentation to potential funders and donors about the network and its first results. For this presentation an information package has to be produced referring to the philosophy of the network, the working program, presentation of results of the pilot projects and the continuing work in Phase II.
The information package will use elements of an exhibition, visualization of the problem and the proposals to deal with these problems. Based on this public relation work, activities can be developed not only to promote the network, but also to support activities of other agencies and authorities.

Supporting publications and participation in the exchange of experiences on a regional and global level, will mean in Phase I to keep all interested partners informed about international activities and their outcomes (Newsletter). If any partner is in the position to contribute to the global debate about environmentally acceptable, this should be supported by the network according to the funds.

3.2.2.2 Mobilizing financial and human resources

To achieve the results in mobilizing financial and manpower resources and facilities, the following activities have to be initiated:

- establishing contacts and negotiating finances with national and international donors,
- mobilizing financial resources of executing private and public units, by establishing cost sharing models for implementation, and
- working out investment plans according to technical and economic feasibility as a consultancy service to interested private and public units.

Implementation of environmentally acceptable waste management is not only a question of technical know-how and experience. Any decision maker responsible for a budget has to know the financial implications of a proposal to improve procedures and technologies in waste management. There is a general lack of economic understanding within technical institutions involved in the matter. But the potential partners of the network have a growing demand to evaluate economic impacts of the programs as to ascertain the financial feasibility of their implementation. This aspect has to be covered from the very beginning and there are already first activities in the field of solid waste (see reports of R. Giesecke).

This leads us to the manpower side of the results and activities. On one hand, the requirements for qualification have to be identified based on an analysis and evaluation of already existing human resources and experiences in the Region. On the other hand, forms of qualifying programs will be identified, which will have a multiplying effect that is much stronger than all the ongoing programs. There are training and upgrading programs, for instance in CEPIS, but in the given context most of these programs are very much oriented to a more academic kind of target group. And at the same time, their physical capacity is limited not only due to financial restrictions so that it might take ages to reach a substantial effect in the near future.
The coordinating unit has to master the information and training needs of very different customers in the initial stage of the network, that means in Phase I. New professional skills like economics, communication, training of academic staff and plant personnel have to be integrated into the manpower pool of the network. Otherwise, the network is in danger to degenerate into a circle of a few academic technical specialists travelling around Latin America, being ignored by anybody else. This point of view has been taken into consideration defining the qualifications of experts within the pilot projects described in the appendices II/3 and II/4, and it will effect the manpower and institutional layout of the coordination unit.

The support facilities of the network, such as information services or data bank, have to offer those inputs by which the lack of know-how and experience can be analyzed. It has to be differentiated, whether there is a gap in appropriate technology that has to be filled, or whether there is an information gap. The information about waste technology is well organized in the world, but many interested bodies in this Region do not have access to this information. However, it is not always a question of access to information, but it is also a question of behaviour towards information. The information system within the network has to make sure that rare resources are not wasted in duplicating activities. At the same time, applicants as well as researchers have to be trained to use the available information. Again, this means training and communication.

Because of the already existing experience from REPIDISCA at CEPIS, and similar experience from ECOLINE at ECO 1), this experience should be used to reach a customer-oriented layout of both systems and an increasing acceptance. REPIDISCA and ECOLINE can coordinate their software and excessive resources can be used to find out the demand for information, and to concentrate on training to use information.

3.2.2.3 Mechanism of coordination

Finally it becomes clear, to realize the Latin American Network for Environmentally Acceptable Waste Management needs also an institutional frame.

There has to be a coordinating unit (Co. Un.) of all the activities, and there have to be cooperating centers (CC) in each country of Latin America and the Caribbean as a result of the project.

The activities to achieve these results will concentrate on:

- defining the responsibilities of the coordinating unit on one hand and the cooperating centers on the other,

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- defining financial needs and allocating financial resources for implementation of network activities on both levels,
- supporting horizontal cooperation between cooperating centers,
- establishing monitoring mechanisms for activities, results and financial resources on both levels,
- identifying and selecting cooperating partners as new potential cooperating centers,
- supporting of developing potential cooperating centers
- identifying local experts as support persons for cooperating centers, and
- contacting potential partners and users.

Due to the prerequisite that the already existing structures should be used to form the network without any considerable overhead investment, it seems that the Co. Un. can be only integrated in an already existing interregional organizations related to the subject.

Actually these are CEPIS, ECO, ICAITI, related to different sectors of risk management in the field of environment protection and situated in different locations of the Region.

ICAITI is very much specialized in the treatment of industrial wastewater, located in Guatemala and active in Central America. It is for sure an important partner within the network, covering the industrial side of the problem. Within two ZOPPs there was the chance to discuss these aspects in detail with representatives of ICAITI. This institution is willing to support the network idea as one of the cooperating centers.

ECO is specialized on epidemiological and toxicological aspects of health effects of chemical contaminants from industry and agriculture, promoting training, information exchange and research projects in the areas of human health. ECO is located in Mexico. For details, see the appraisal reports of Dr. I. Noetlich (Strengthening ECO, Technical Part) and W. Patzlaff (Institutional and Financial Part) in the appendices II/5 and II/6.

The ECO appraisal comes to the result that the main efforts should be made to strengthening ECO in expertise on toxicology and two German professionals should be financed as long-term experts. This proposal should be considered as a project on its own, which is independent from the network idea. Once the need is defined out of ECO's deficits and the network priorities, this situation will change and strengthening ECO will become also a network task.
CEPIS as the Pan American Center for Sanitary Engineering and Environmental Sciences has its activities mainly on the development, dissemination and promotion of appropriate technologies in the field of water supply and wastewater treatment and reuse. Current projects are strengthening the aspect of management of hazardous and industrial waste.

Both CEPIS and ECO are regional PAHO Technical Centers, present in the member countries via PAHO Representatives in 24 countries (see organization charts in the appendix I/3).

As far as the "knots" in the suggested network are concerned, a maximum number of cooperating centers will be established in Phase I to participate in the actual projects of the network related to the training and dissemination aspects, as well as to the technical aspects.

Cooperative Centers which could tentatively be founding cooperative centers are described in the appendix I/9.

3.3 Time schedule and sustainability

In order to get substantial results and to establish functioning working routines, eight to ten years are necessary to develop a sound foundation for a self-sustaining network with professional reputation in the Region. This assumption takes into consideration that in many fields, especially in the sector of solid waste management, activities have to be developed from a very basic level.

The availability and the absorption capacity of resources of all bodies concerned are limited in the moment, and will be developed in four to five planning periods to a level that will make the sustainability of the project most likely.

Within the PAHO/CEPIS structure, there is a basic experience in raising funds, which will be useful for the network to find additional and new sources of funds. Phase I will be determined by obtaining the basic elements of the network, in order to realize the first results and to present the work of the network and other interested parties.

In Phase II an adjusted working plan based on the first experiences, more specified priorities including new sectors and new partners, will determine the agenda. From Phase III onwards, the stress has to be concentrated more on training and communication aspects.

The final one or two phases will be dominated by activities:

- to convert the network into an adapted institutional and legal form, flexible enough to execute its own budget, and wide range of activities completely independently,

- to carry out projects in all main areas of waste management as a base to offer technical and economical viable proposals to the customers, and
to intensify activities in the field of training, public awareness and dissemination of experiences on the national or international level.

Based on this time schedule, after eight to ten years the reputation of the network will be high enough to find sufficient funders for the growing range of activities.

4. PROJECT EXECUTING AGENCY

Within the logic of the network idea, there is no independent project executing agency, but there is a working context of interested partners. Out of this context, one unit should be selected as an executing agency.

Within this appraisal mission, the experts dealing with different aspects of the network idea discussed several options related to the projects executing agency. Finally, the alternatives were whether the coordinating center of the network should be located on "neutral ground" with all communication facilities somewhere in the Region, or within the PAHO structure.

The first option was mainly evaluated because of the fact that all existing organizations, including PAHO, have their particular tasks, commitments and limitations. PAHO's Representatives, as part of the UN Network, in the past had some kind of diplomatic status. PAHO is basically financed by the governments of the Region. This has to be taken into consideration within all activities effecting the environment discussion on the national level. No government wants to finance its own trouble-makers.

PAHO is mainly committed to the health sector, that means it is looking at the adverse effects of environmental deterioration to the human beings and how to cure them. PAHO is a big bureaucracy far away from the private and the informal sector which has to be included in the network idea for an environmentally acceptable waste management. If anything of relevance will go under implementation, PAHO does not depend on one project more or less if that does not fit into the pattern or might create trouble to the well-established UN bureaucracy and its staff members. PAHO offers the rare chance to earn hard currency in the Region, so to become a PAHO employee is a value on its own too precious to be endangered by any kind of engagement. Often PAHO like other UN Agencies, has the capacity to absorb idle professional expertise set free out of political reasons. All this backs the reputation and professional authority of PAHO and its representatives and suborganizations.

But at the same time, it is likely to be an obstacle for a dynamic unit that has to push things without consideration for all the rules and regulations of the Headquarters, the donors, the representatives, and the national and communal authorities.

Despite all this, PAHO is a well reputed organization in Latin America and the Caribbean that has already proved, through its regional organizations, the ability to get things going in the field of environmental and health protection. At the same time -and this is the most important aspect- it has the credibility to potential funders.
From the latest Financial Report of the Director, you can see that PAHO is mainly but not only dealing with government bodies in Latin America and the Caribbean, other UN Organizations and Regional Development Banks, World Bank, etc., but also with other private and public foundations, Universities and companies. PAHO has transparent procedures as far as accounting policies and the review of the financial position are concerned.

Within the structure of PAHO, CEPIS is an institution dealing in accordance with the financial and administrative rules and regulations, but also committed to raise and administer extraordinary funds to run its own programs. The tasks of CEPIS are described in appendix I/5.

CEPIS as a sub-unit, parallel to ECO, of PAHO's Environmental Health Program, deals with a biannual budget of about 2.5 million dollars of which already in the past roughly 30% was financed through directly managed programs. This amount came from 11 different donors throughout the last ten years. The actually carried out programs are supported by the World Bank/IBRD, the International Development and Research Center/Canada, and the Peruvian Government. Seven of the twelve ongoing program are funded by GTZ. It is obvious that the sources of funding were substantially reduced since 1985.

From the professional point of view, it is evident that CEPIS is not only raising and administering funds, but carrying out projects with a qualified and differentiated staff. Altogether, 65 staff members were employed with CEPIS in August 1990, four posts were vacant. For details of the distribution according to departments, professional status, nationality, sex, etc., see appendices I/4 and I/8. 33 of the staff are female, 32 male. Thus, despite CEPIS is a technical institution, 50% of the staff is female, and that on all levels. 40 people are employed under general services or have temporary jobs within the support services and the laboratories, and 25 are professionals, mainly engineers. Seven Latin American and Caribbean countries are represented plus Japan and the US.

Consequently, CEPIS has experience in carrying out programs with staff of different nationalities. It has close contacts with other institutions in the field. One example for these contacts is the "Young Professional Program". Young engineers from different countries are involved in programs for 10 months, and then go back to their original positions. Eight persons from six different countries are presently in this program. Of course, it is a limited capacity, but gives the starting point for intensification of training and dissemination activities.

As far as the staff is concerned, CEPIS has the basic infrastructure and experience to support the coordinating units of the network substantially under the precondition that there is a continuity in the policy of the center. The present Director has a clear understanding of the role of CEPIS within the network, and has an integrating style of management. The administration is in command of a qualified support system for the whole unit, dealing with all kinds of institutions and their particular administrative needs all over the
Continental and Europe. Due to the fact that the personal policy, especially on the management level, is a matter dealt within Washington, there has to be an understanding between PAHO, the network members and funders that the staff policy should support the network idea as a long-term project.

As far as the professional deficits of CEPIS are concerned, there is an ongoing project "Strengthening of CEPIS", mainly covering the aspect of toxic waste and supporting the information system REPIDISCA. This separate program should become part of the network project. The working plan was just now updated for the next 18 months. Through this program, the aspect of hazardous waste will be strengthened, which will also widen the professional capacity of CEPIS as the network coordinating unit.

As far as REPIDISCA is concerned, the network and its information and dissemination needs can help to give REPIDISCA a more practical direction. For details about the information and communication services of the respective members, measures have to be taken to tailor the existing services to the needs of the future (see report "The Information Systems by ECO and REPIDISCA/CEPIS viewed within the Context of a Latin American Network for Environmentally Acceptable Waste Management" by P. Habermann. (See appendix II/7).

We agree with the proposal to provide a short-term expert (four weeks) who will develop a sequence of measures, which will enable the existing information service to function as a carrier of internal communication and a promoter of the network services, while REPIDISCA will be integrated into the coordinating unit of the network.

Besides the need for strengthening CEPIS in the field of communication and promotion, there is a deficit of experience in economics in general and environmental economics in particular. This should be balanced already in Phase I of the project by establishing a unit for economic evaluation of network projects, working out case studies for potential investors, decision makers or just for general public relation work. (See appendix I/11). The unit "economic evaluation" has to make sure that there is a growing know-how pool in economic matters in CEPIS and accessible to other members, which can be built up through ongoing projects and transferred into the countries via the Young Professional Program, and special consulting and information programs. (See appendices I/11 and I/12). One aspect of the proposed presentation of results in Phase I has to be the economic viability.

CEPIS has the basic capacities to function besides its tasks as a PAHO technical center, as the coordinating unit of the network. But this additional task cannot be absorbed within the existing CEPIS' structure. We suggest to establish a clear organizational structure within CEPIS to carry out the initiatives, coordination of activities, contacts, etc., independently from the ongoing program of CEPIS. For this purpose, there will be an additional unit "network coordination" with a substructure under the director of CEPIS.

We recommend to recruit an economist as a regular staff member or a regional professional into this position. He/she will commit 50% of his/her time to strengthening the field of economic implications, financial viability,
cost/benefit analysis, etc., for the whole of CEPIS. The other 50% is due to
give the network idea the necessary push especially by going out of the pre-
mises of CEPIS, and converting CEPIS in the long run into some kind of
communication center for different types of organizations and professions.

As part of the evaluation of Phase I, it has to be considered whether the
network should not be transferred into a Non-Governmental Organization, if the
rules and regulations and the tasks of PAHO may turn into an obstacle for
further development.

According to the overall experience from other projects, it has always
been of advantage to form an independent coordinating unit, in order to support
the self-organization of existing professions, institutions, companies, cooper-
atives, etc.

In the case of the network, CEPIS and GTZ could provide the starting
capital in terms of infrastructure and funds, develop a starting performance
with the other interested partners and invite them for membership and to
participate in the ongoing program. (See report of J.H. Penido, appendix
II/8).

5. COST AND FINANCING

To put the main emphasis again on the already described activities, the
cost for the project proposal as designed above will be structured and added
up, according to the following three groups:

- network pilot projects,
- dissemination of experiences, etc., and
- network coordination.

Throughout all three groups, we differentiate the cost into
Foreign/German contribution and local/partner contribution to demonstrate the
mutual interest in the realization also in terms of financial commitments. It
is not always possible to quantify the local contribution because there is no
market price for the input, or the market price does not stand for the impor-
tance of the local contribution. This is mainly the case within the pilot
projects on the liquid waste sector, where we described the local contribution.

As far as manpower is concerned, we estimated the expert-months per ac-
tivity or we defined some kind of expert pool, mainly in the field of training
and dissemination. The expert-months were separately estimated for local or
regional experts and foreign experts as a result of the need for technical
cooperation and due to significant differences in calculating the total project
costs.

The cost calculation is based on the consultants proposals in the field
of solid and liquid waste, the consultations with the local expert in solid
waste management, the proposals by the communication expert related to the
communication needs, the technical, organizational and financial appraisals of
strengthening and integrating ECO, several staff members and the Director of
CEPIS, and finally my own experience and suggestions.
The calculation adds up to 1,990,500 DM for direct funding, 142 expert-months for local consultants and 40.5 expert-months for foreign consultants. There is a substantial local contribution which cannot be quantified in all positions and, therefore, cannot be added up in one sum (see appendix I/10). This structure shows clearly that the main effect even in the first phase where the basic structure of the network has to be established, lies in mobilizing local and regional resources. The local experts are the backbone of the network. Within the described design, this project can eliminate the lack of funds to develop their know-how and expertise, and the absence of technical cooperation with other regions.

The financial administration should be carried out as follows:

The network is one project within CEPIS. The coordinating unit channels the funds via CEPIS directly from PAHO to the partners of the network. In case of projects within CEPIS, this means an internal movement of funds. In case of local experts, the coordinating unit is either recruiting the personnel via CEPIS' administration, or delegating this job to the network cooperating centers. As far as foreign experts are concerned, GTZ holds the funds and is recruiting short-term experts directly, according to the terms of reference agreed with CEPIS. The coordinating unit will optimize the travelling cost for experts by coordinating them to the needs of different activities.

Regarding the ongoing project "Strengthening of CEPIS", we will suggest to integrate this project into the network. This means that the aspects "hazardous waste", "industrial waste" and "data bank/REPIDISCA" will be treated like pilot projects carried out by CEPIS. This will give a more application oriented REPIDISCA guideline to this ongoing project and make things easier from the administrative point of view.

It is also suggested to integrate the special task group "Educación Ambiental" into the coordinating unit to strengthen the social and educational aspect besides the technical and economic one in discussing priorities, preparing all kind of information material and, finally, supporting the public awareness related to environmentally acceptable waste management.

6. PROJECT EFFECTS, ASSUMPTIONS AND RISKS

6.1 Prerequisites, assumptions and risks

There are three main prerequisites related to different aspects which have to be fulfilled once the network objective "to exchange, disseminate and develop know-how and expertise related to environmentally acceptable waste management" has been realized:

1. The existence of a growing political and public support for the idea of integrating environmental aspects into the base for decision making in the Region.
2. An increasing and ongoing positive attitude of all participants of the network.

3. Sufficient funds to be raised by the network.

All the risks one can describe related to the realization of the network can be deduced from these prerequisites. Of course, there is an interaction between the ongoing attitude of the participants and the first steps to go. The successful installation of a working coordinating unit will be the crucial point for any further movement in this phase. It has to be a unit responsible to the target set of the network. There is a lot of skepticism whether the coordinating unit within CEPIS and within PAHO will be absorbed as one fund raising instrument for PAHO/CEPIS. So the institutionalization of the coordinating unit cannot be seen only as a technical matter, but also as a very sensitive political one. If the network is not able to develop its own identity respecting the interests of PAHO as a major funder through CEPIS, it will not work.

It is the precondition that the coordinating unit can develop the authority to execute the network working plan according to the needs of the network members and the requirements of the subject.

This is a momentum that will be the crucial point in Phase I. CEPIS' representatives are aware of this risk and are willing to take the responsibility, within a clear organizational structure. CEPIS was able to prepare the project so far, it was able to widen its scope of activities in the past already.

The project should start now, and there is no better alternative than to integrate the coordinating unit with its complex tasks as a separate unit within CEPIS. This will give the development a new drive.

6.2 Effects

It is in the nature of a very broad project goal (exchange, dissemination, development of know-how and expertise in environmentally acceptable waste management) that not all the results will be reached in the same degree and phase of the project.

In Phase I the network has to become an authority in the field in Latin America and the Caribbean, and that is realistic. The presentation of network results to potential funders will be an indicator of how far this effect could be reached within two years. This credibility will then develop a dynamic in coordinating manpower and financial resources. Both funders and political authorities are not interested in inventing the wheel again, once it is already existing, and the available resources in relation to the huge problems will be limited anyway.
7. SUMMARY OF THE GERMAN CONTRIBUTION

In Phase I of the appraised project, the foreign contribution to enable the project going should be covered by German aid.

First of all, there is a strong component of technical cooperation mobilizing local manpower resources as well as foreign expertise. This component covers the overall aspects of the project proposal, the pilot projects, the training and dissemination and the institution building. Altogether, 182.5 expert-months have to be financed, of which 142 are for local and 40.5 for foreign experts. All of them are short-term experts, except those local professionals supporting the formation of the coordinating unit. Even they will be financed only in Phase I to this extent. Furthermore, specified funds are needed to carry out the activities. They cover the pilot projects as far as particular equipment, running cost, travelling cost and allowances are concerned. They also cover the presentation and promotion costs of the project results to convince other funders and partners to support and to join the network in the long run. For this, DM 1,990,500 are calculated as the contribution for two years, including PAHO's overheads.