



Waste Management
Administration



Joint Final report, in the Stockholm-Tegucigalpa Co-operation, June 2001 to December 2005

Executive summary

According to underlying legal documents we hereby present this "Final Report" covering the time from June 2001 to December 2005.

There has been three "Annual Review Meetings" held during the project period. An "Annual report" was presented at each meeting. For project 1 there has also been held a "Final Review Meeting" including a "Final report".

"The first "Annual report" was presented on a meeting on the 12th of March 2003 and covered the project period between June 2001 and December 2002. The report covered only Sub-project 1 and Sub-project 2. In October 2003 a supplementary contract for those two Sub-projects was signed between The City of Stockholm and The City of Tegucigalpa. At the same time, October 2003, a new contract between The City of Stockholm and the City of Tegucigalpa was signed. This contract was signed for carrying out Sub-projects 3, 4 and 5. As a complementary to these two contracts Sida has signed two new "Undertaking to pay invoices" covering the financial part of the co-operation.

The second "Annual report" was presented on a meeting on the 4th of June 2004 and covered the time from January 2003 to May 2004.

The third "Annual Report" was presented on a meeting on the 24th of February 2005 and covered mainly time from June 2004 to December 2004.

The financial reports cover the entire project period from June 2001 until September 2005 and are found in Annex 5 and 6.

Over the time each "Annual report" has been presented and fully adopted by both The Stockholm City Waste Management Committee and The Stockholm City Executive Board.

Sub-project 1, "Institutional capacity building and support in Waste Management", was officially finalised in September 2003. A final review meeting was held in Tegucigalpa on the 19th of September 2003 and the final report was published in December 2003. The final report is found in Annex 1 and the financial outcome is found in Annex 5.

Sub-project 2, "Industrial Waste Regulatory Supervision Programme", started formally in June 2001 but did not come to practical action until September 2001. The project was delayed in the finishing phase due to two major problems. First delay was depending on the fact that the project

leader resigned from the project by the end of December 2003. Second delay was depending on problems with procurement of consultants necessary to perform the planned final part of the project. In order to finalise the project a contract was signed with the Swedish consultancy company SWECO International in the end of November 2004.

During January and February, 2005, the remaining parts have been carried out. The final report was presented on the third Annual Meeting on the 4th of June 2004 which makes this project finalised. The final report you will find in Annex 2 and financial outcome is found in Annex 5.

Sub-project 3, "Environmental information" started in September 2003. The sub-project was initially manned with personnel from the City of Stockholm but they resigned from the sub-project in April 2004. To solve the situation a contract with the Swedish consultancy company "Global reporting Sweden AB" was signed to carry out the sub-project. They are, of course, supported by specialists from the City of Stockholm. The final report you will find in Annex 3 and the financial outcome is found in Annex 6.

Sub-project 4, "Management of hospital waste" started in September 2003 with a sub-project leader from the City of Stockholm. By the end of December 2003 the sub-project leader resigned from the sub-project. In order to save the sub-project, and carry it out as planned, it was necessary to engage a Swedish consultancy company. In the middle of February 2004 a contract with the company "Sweco International AB" was signed to carry out the sub-project. A Swedish expert from Karolinska University Hospital has all the time been connected to the sub-project. The final report you will find in Annex 4 and the financial outcome is found in Annex 6.

Sub-project 5, "Exchange of experience in Urban Planning" has not been carried out according to the original project outlines. An unpredicted lack of capacity from the City of Stockholm and an uncertainty from the City of Tegucigalpa whether the sub-project was needed or not led to the decision on last "Annual meeting" to drop the sub-project in its original form.

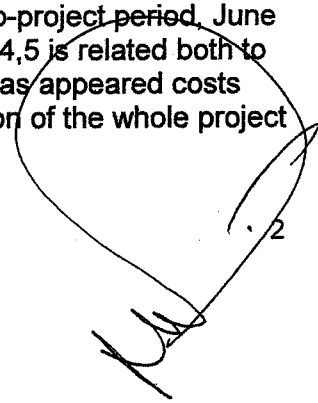
At the "Annual Review Meeting" in February 2005 the City of Tegucigalpa was asked to come up with alternative proposal for agreement by the City of Stockholm and later official adoption by Sida.

Financial summary. Looking to the financial outcome you can see that Sub-project 1 is finalised within the budget and Sub-project 2 will also be finalised within the budget. Those two sub-projects may also generate a small amount of surplus. An ongoing discussion with Sida is to handle the non-existing financial contribution from The City of Tegucigalpa, marked in grey in the attached financial summary.

The budget overdraw related to sub-project 3 depends on extra costs which appeared when the sub-project had to be reorganised because the experts from the City of Stockholm resigned from the sub-project and other experts had to be engaged.

Regarding sub-project 4 there is it no reason to expect an overdraw of the sub-project budget regarding known facts so far. A reliable prognosis is presented in the table below. Details in the financial summary can be found in Annex 6.

The following table gives you a brief summary of cost related to the budget until the 3rd quarter and estimated expenses for the 4th quarter. The figures cover the entire sub-project period, June 2001 until December 2005. The budget overdraw related to C-ordination 3,4,5 is related both to the fact that the need for time was underestimated in the budget and that has appeared costs which was not in the budget at all. The underestimated cost for co-ordination of the whole project



has later on been authorised by Sida in Stockholm to be covered within the total project budget. Other costs not within the budget were an executive visit in Stockholm from Dra. Waleska Pastor and Ing. Jonathan Lainez, our main counterparts from the City of Tegucigalpa. The visit took place in the end of May/beginning of June 2005.

The same situation also appeared in sub-project 4. But with a wider budget frame it has been possible to handle the situation within the budget.

The absence of contribution, named above, from the City of Tegucigalpa has also affected the outcome in a negative direction.

Looking at the grand total figure it is estimated that the entire project can be finalised within the frame of available funding.

Sub-project	Budget	Outcome	Budget /. Outcome	Remains until 31/12/05	Expected total outcome
1	3 832 500	3 760 579	71 921	0	3 760 579
2	1 835 500	1 784 615	50 885	0	1 784 615
Co-ord. 3,4 5,	2 000 000	2 087 832	- 87 832	220 000	2 307 832
3	3 800 000	3 914 915	-114 915	60 000	3 974 915
4	6 103 750	3 794 847	2 308 903	1 755 000	5 549 847
5	0	0	0	0	0
Total	17 571 750	15 342 788	2 228 962	2 035 000	17 377 788

Auditors report. A contractual audit of the sub-project has not been carried out to this Final Meeting. The latest report was presented at the "Annual Meeting" February 2005. In order to save some money when the entire project now is ending up I have chosen to make a final auditors report when all the financial transactions has occurred after the 4th quarter 2005.

Conclusions

Sub-project 1 is finalised in a successful way and its final report has been reviewed and approved by the two Cities and Sida. In my opinion I am convinced the final report fulfils the objectives from the original terms of reference and can be used as a valuable tool for further actions to develop the waste management in the City of Tegucigalpa.

Sub-project 2 is finalised, with an unpredicted delay, by the end of February 2005 and its final report has been reviewed and approved by the two Cities and Sida. In my opinion the sub-project reached its goals and will be useful as a model for further development of the field of monitoring the industrial waste.

Sub-project 3 had a delayed start as pointed in earlier reports but has since then developed in a very satisfactory way. All the planned activities have been carried out and the engagement from the different working groups has been very good. The idea of co-operation with local organisations as well as NGO:s to create a model of acting that can be used in other parts of the City is interesting and could easily be used in the future. In my opinion the sub-project has well reached its goals.

A handwritten signature in black ink, followed by the number '3' written below it.

Sub-project 4 had also a delayed start but with dedicated working groups and skilled experts from Sweden the results must be considered very good. The strategy for the project has been, as in sub-projects 2 and 3, to create a model how to handle the hospital waste in a more environmentally friendly way. As the sub-project co-operated with a number of different hospital this model can easily be used for other hospitals up grade their waste management in the right direction. In my opinion the sub-project has well reached its goals.

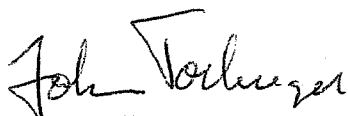
Sub-project 5 was suggested to be shut down in its original form at the "Annual Review Meeting" in February 2005 because the fact that the City of Stockholm was not able to come up with the necessary experts. Therefore it was decided that the City of Tegucigalpa should work out an alternative proposal for the sub-project and with approval from both Cities present it to Sida for their approval of using the original funds. The proposal was presented so late that there were no time left to carry out the proposal. In my opinion the best thing to do, under present circumstances, is to officially close down the project and conclude that the funding could not be used as planned.


From a general point of view the sub-projects are carried out as planned and can very well be used as models for the future development in the different areas of managing the environment.

Finally we must ascertain that the entire project is worth more attention and engagement from both the City of Stockholm and the City of Tegucigalpa when you look back and see the obvious results, which has been obtained.

I refer to annexes 1-6 for details.

Tegucigalpa 23rd of October 2005


Johan Torberger
Project Director
City of Stockholm


Waleska Pastor
Gerente General
Ciudad de Tegucigalpa

List of annexes:

Annex 1: Final report for Sub-project 1 in The Stockholm Tegucigalpa Co-operation, "Institutional support and capacity building and support in Waste management", June 2001 – June 2003

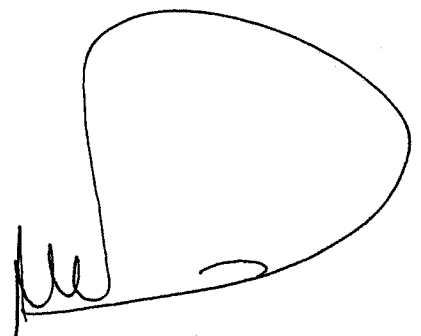
Annex 2: Final report for Sub-project 2 in The Stockholm Tegucigalpa Co-operation, "Industrial Waste Regulatory Supervision Programme", September 2001 – February 2005

Annex 3: Annual report Sub-project 3, May 2004 – December 2004

Annex 4: Annual report Sub-project 4, June 2004 – December 2004

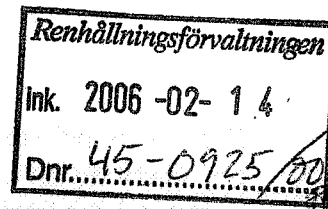
Annex 5: Financial summary, June 2001 – December 2004, Sub-project 1 and 2

Annex 6: Financial summary, September 2003 – September 2005, Sub-project 3, 4 and 5 and co-ordination

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MINUTES

24 October, 2005



Lic. Miguel Rodrigo Pastor (Major Tegucigalpa)
Dra. Waleska Pastor (Major Office, Tegucigalpa)
Ing. Jonathan Lainez (Major Office, Tegucigalpa)
Maxine Sierra (Major Office, Tegucigalpa)
Dr. Carlos Rivas (Sida, Tegucigalpa)
Johan Torberger (City of Stockholm)
Magnus Montelius (Consultant)
Kristina Robberts (Consultant)

Regarding: Final Annual Meeting, Stockholm-Tegucigalpa Project

Date/time: October 24, 2005, 9:00 am to 12:30 p.m.

Location: Major Office, Tegucigalpa

Introduction.

The Final Annual Meeting of the Project Stockholm – Tegucigalpa was held with members from the Major Office in Tegucigalpa, Sida Tegucigalpa, the City of Stockholm and Consultant hired by Stockholm.

The Major from Tegucigalpa, Lic. Miguel Rodrigo Pastor, expressed his gratitude for the support received from the Government of Sweden, specifically through the activities under the project Stockholm – Tegucigalpa.

He also expressed his interest in provide continuation to the activities under this project and mentioned that they considered that the cleaning theme is strengthened through two aspects: a) supervision and stimulus from the local authorities, and b) participation of the population and authorities.

Mr. Johan Torberger, City of Stockholm, apologized for the absence in this meeting of one authority from the City of Stockholm. He also expressed his interest on the survival of this project and considered that the goals of the project were reached.

An Agenda was presented and approved.

Sub Project 1 – Institutional Capacity Building and Support in Waste Management

A Final Meeting for this Sub Project was held in 2004.

Magnus Montelius, Consultant, expressed their satisfaction for the achievements on this sub project. They consider this project a well documented project and one of the delays is not to count with more money and time to continue the supervision of the same.

Dra. Pastor informed that as a contribution from the Municipality to this project, they are inheriting the city dumpsite, a piece of land to have a new landfill, and a new contract for collection/disposal of waste. She also informed that the actual authorities will pass to the new Government all the information related to the actual situation on these projects.

Sub Project 2 – Industrial Waste Management

The implantation of Sub-project 2 was presented in the Annual Meeting in September 2003. Following the comments pointed out by UGAM in 2003, the City of Stockholm requested SWECO to make a proposal to address the remaining issues identified by UGAM. In the beginning of 2005 a two weeks mission by two Swedish and one Honduran consultant combined training on cleaner production and environmental management with recommendations on various technical issues that had previously not been addressed. The result of the recommendations and training has been reported and evaluations were made during the training indicating a high level of satisfaction among the participants.

One of the recommendations to the new Municipal authorities will be to follow the recommendations provided during the training meetings.

The Municipality informed that two new interinstitutional agreements are being signed: one with COHEP and other with the “Cámara de Comercio”.

No treatment system is available for the solid industrial waste. Provisionally both, industrial and hospital solid waste, will be deposited in the same place.

With the completion of this activity, the meeting approved of the conclusion of Sub-project 2.

Sub Project 3 – Municipal Information Focusing on Solid Waste and Environment

This project was composed of three components:

- Capacity building in strategic communication for involved stakeholders
- An information campaign in two targeted areas, Villanueva and Carrizal
- A long-term strategy for the Tegucigalpa Municipality

An additional fourth component was later added to the project
-A youth exchange Stockholm-Tegucigalpa

The main objective of Sub-project 3 was to increase knowledge of communication methods and strategies among staff at the municipal departments, NGO's and individuals involved in the project.



Some outputs of the project:

A total of eight workshops in strategic communication were held during the project, with the participation of UN staff, leaders of Compartir, students from the "Universidad Católica", and local committees and other groups.

Students from "Universidad Católica" carried out environmental workshops for children, adults and teachers with a total of around 1 200 participants.

An information campaign was held from the month of March to June 2005. The most relevant goal of this campaign was the change of attitudes and behavior related to solid waste and litter on the two selected poor areas in Tegucigalpa.

Some of the activities held during this campaign were a musical competition on how to take care of our environment, football tournaments, and some litter collection days (12 days in total). It is important to mention that once the campaign was finished, both neighborhoods have been working on some other litter collection days supported by their own neighbors. One of the selected areas is working on a recycling project.

It is considered that the goals of Sub-project 3 have been fulfilled. For more details, methods and results please read "Completion Report Stockholm Tegucigalpa, Sub-project 3".

As decided by the Municipality and the project consultants, prizes were granted to both areas, Carrizal and Villanueva. Following the request presented by the local committee, and based on the security of the people, the project provided Villanueva with a total of 16 lamps installed in different areas of the neighborhood. The Municipality was in charge of organizing and financing the Prize to Carrizal; an extra collection of garbage a week for six months. This has not yet been carried out. However the Municipality promised that they provide this prize to Carrizal before the end of the present Government period.

During the meeting consultants strongly recommended providing continuity on this subject and the Municipality informed that at the present they are making a follow up of these litters collection.

Consultants will provide a complete document with full information regarding the actions taken in this project. They are also working on the preparation of a manual. The Municipality raised the question on how the private sector could be involved, as the change of attitudes does not only include the community but also the producers of garbage.

Sub Project 4 – Hospital Waste Management

One of the technical objectives of this project was to protect the health of people getting in contact with the waste. Seven pilot hospitals were chosen as recipients for training and recommendations providing training to key persons from each hospital. Training was also conducted in separate workshops.



There has also been intensive activities on institutional, financial and technical issues which has been reported extensively and presented in various inter-institutional workshops and in meetings with stakeholders.

After the completion of the project, Consultants considered that there have been excellent progress in the project implementation and positive developments in Tegucigalpa hospital waste management, as at the beginning of the project all the waste was mixed and currently 70% of the hazardous waste is handled separately.

A set of reports are being produced to facilitate the continuity of the methodologies apply on this project. The same will be distributed to each of the seven pilot hospitals, Health Ministry, Municipality of Tegucigalpa, Sida and any other institution involved on the project.

As a result of the Sub-project the exposure of hazardous hospital waste to health personnel, waste collectors and scavengers has been reduced significantly. One conclusion regarding scavengers is that it is essential to ensure that the waste is maintained completely separate (i.e. with no other waste mixed with the hazardous fraction) and covered at the special cell at the landfill, since the people living at the landfill will enter the special cell if they can find any recyclable material even if they have been thoroughly sensitized and informed on the risks, since their social and financial situation is rather desperate.

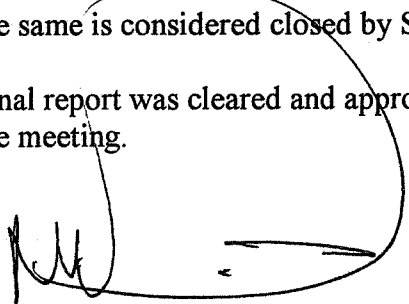
Final reports presented for the 4 Sub Projects were approved by the participants to the meeting.

Final Report

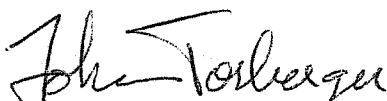
All sections of the final report were discussed. Some remarks were mentioned by the city of Stockholm specifically on the finance aspects and some expenses not covered by the Municipality.

It was informed that no balance is available for continuation of this project; therefore the same is considered closed by Sida.


Final report was cleared and approved as a "Joint Final Report" by the participants of the meeting.



Dra. Waleska Pastor
Gerente general
Ciudad de Tegucigalpa



Johan Torberger
Proejct Manager
City of Stockholm

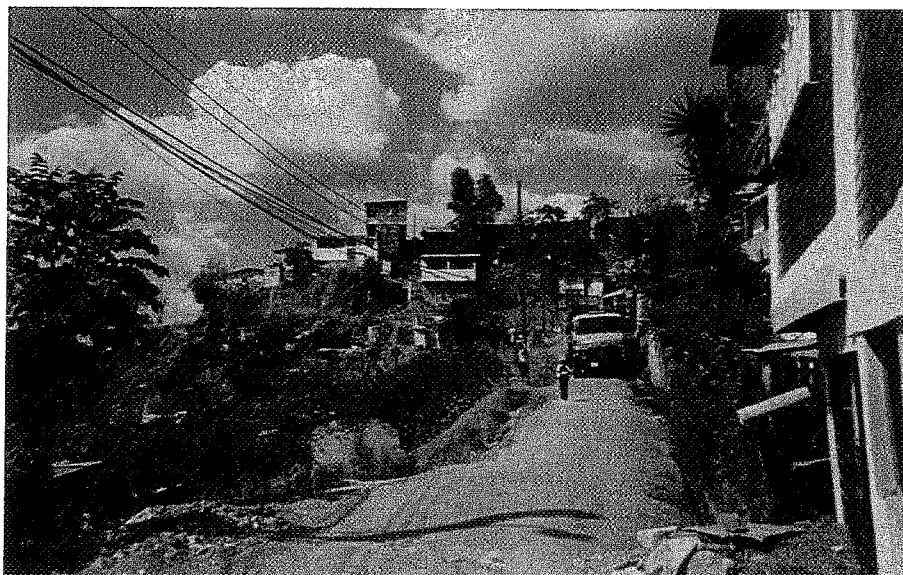


Carlos Rivas
Program Officer
Asdi, Tegucigalpa

Cooperation between the cities of Stockholm and Tegucigalpa

SOLID WASTE MANAGEMENT AND THE ENVIRONMENT IN TEGUCIGALPA

Evaluation
Final Report, August 2006



Sergio Albio González, Camilla Andersson

Cooperation between the cities of Stockholm and Tegucigalpa

**Solid Waste Management and the Environment
in Tegucigalpa**

Evaluation

**Final report
Stockholm, August 2006**

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EXECUTIVE SUMMARY

Stockholm and Tegucigalpa have cooperated in the field of environmental and waste management through a twinning arrangement since November 1999. In June 2001 the two cities officially embarked on an environmental cooperation project under which four subprojects were carried out addressing different areas of work within the waste management sector in the city of Tegucigalpa. The intention of the cooperation was to strengthen Tegucigalpa in its capacities related to management and administration of municipal (household), industrial and hospital waste, by working with institutional capacity building, information campaigns and provision of technical advice.

Tegucigalpa is facing many challenges related to waste management in the municipality, as how to succeed in providing collection of solid waste in all areas that are currently left without such services, needless to say that these are the most impoverished areas of the city.

Sida has a tradition of cooperating in the field of environmental management and environmental hazards in Central America, therefore this project was initiated in the aftermath of Hurricane Mitch and falls well within Sida's strategy for the region (2001-2007). The orientation for Sida's cooperation with Honduras is further devised to include social sectors such as health, water, sanitation and social infrastructure.

At the time of starting up the project, the city of Tegucigalpa was struggling to address the infrastructure damages caused by the hurricane. Solid waste was identified as a serious problem since it caused clogged sewers and water ditches, resulting in inundations of black water, and gave rise to an increase of health problems such as Dengue fever and diarrhoeal diseases related to an unsanitary living environment. This was especially evident in the poorer parts of the city, the so-called marginal areas where over half of the population lives.

In an attempt to improve the waste situation, the municipality of Tegucigalpa has embarked on a privatization plan for the collection of waste. This is a long and harsh process edged by several obstacles such as financial shortcomings, corruption and a lack of transparency in the contractual and bidding processes. Moreover, it entails a new way of working for the environmental unit of the municipality, as well as was the case for Sweden some years ago when the country went through a similar process, albeit in a different setting.

While all the subprojects were initially coordinated and managed by the city of Stockholm and the municipality of Tegucigalpa, it was a group of private consultants (SWECO International, Ingeniería y Ambiente de Sula, Sverker Snidare AB and staff from Karolinska Sjukhuset), who made sure that the subprojects reached their objectives within the pre-set time frames and budget lines.

Shortly after the final closure of the subprojects in October 2005, the SIDA office in Tegucigalpa requested an evaluation of the project as a whole (Appendix 7.1) in order to learn from the experiences obtained and to gain a further understanding of how the waste management sector works in Honduras, as well as how the experiences may assist similar projects in other cities.

The evaluation is based on interviews, desk studies and field studies (Appendix 7.2). Since Swedish and Honduran stakeholders have implemented the subprojects jointly, interviews and meetings have been carried out in Tegucigalpa as well as in Stockholm. Due to the uniqueness of each one of the subprojects, they are evaluated separately.

The key questions of the evaluation are to what extent the objectives of the four subprojects, have been reached respectively. Furthermore, the evaluation seeks to assess to what degree the outcome of the subprojects are sustainable and what kind of impact they have had on their respective target groups. The key questions and the subsequent findings are described below:

(Subproject 1) Question: Has the subproject led to a strengthening of Tegucigalpa municipality in its capacities to coordinate, plan and engage private companies in the collection of solid waste?

Answer: Yes, partly. Staff working within the municipal administration during 2002-2006 has been trained, and several endeavours to assist the municipality in the complicated procedures related to the privatisation of the waste collection system have been carried out. The impact of the subproject is partly tangible, partly theoretical. Some of the most evident results are; the inclusion of eight additional marginal areas in the municipal waste collection routes and the introduction of a special clause in waste collector contracts, that priority should be given to the expansion of services to developing areas; improvement in the municipality's operation of the waste supervisory organisation including enhancements in the channels for public complaints; the creation of a new independent account for incoming and out-going funds of waste management; and that the municipality has gained control of the scale at the entry of the city dumpsite. Less tangible outcomes, but of equal importance, was the creation of contract documents intended for the waste collection companies, which were jointly developed with the municipality of Tegucigalpa. This was an arduous process that brought about new approaches and tackled the transparency problems in a way that was inexperienced by the municipality before the project started. Another outcome was the new consciousness among the municipal staff related to cost-recovery and willingness to pay among citizens, which is a general problem in Tegucigalpa. Unfortunately, due to the recent elections, most of the staff that was trained and involved in this subproject, no longer works within the municipality. Therefore, the institutional strengthening in terms of what is left within the premises of the municipality is currently limited.

(Subproject 2) Question: Has this subproject contributed to an increased knowledge about Industrial waste and increased industrial supervision capacities within the Environmental Management Unit of Tegucigalpa municipality?

Answer: Partly. At the time of implementation, the subproject ensured the involvement of staff members from various units of the Tegucigalpa municipality as well as stakeholders from the industrial sector, wherefore new knowledge on industrial waste has reached several people. Another positive outcome of the subproject is that contacts between the municipality and the Honduran organization, COHEP (Consejo Hondureño de la Empresa Privada) were improved during the implementation of the subproject, since it facilitated for the sharing of information in the planned supervisory tasks. This contact has moreover resulted in a new agreement signed between the municipality (the previous administration) and COHEP. During the initial period of this subproject, studies of 30 factories were carried out jointly by representatives from the Tegucigalpa Environmental Management Unit (UGAM) and by the Swedish consultant, which provided a certain extent of increased knowledge about the different characteristics of industrial waste. However, it was not so much the knowledge that was lacking within UGAM, but rather organizational routines and a lack of controlled

supervisory procedures. There were for example no plans available for annual supervisions, no guidance on how to write, analyse or compare the follow-up supervision, nor was there a database where to store the information obtained at each inspection. No such plans, guidelines or databases were developed. Nevertheless, the capacity building activities carried out within the subproject towards its end were highly appreciated by the personnel of the municipality that participated. The implementation of the subproject also resulted in several staff members being trained within the cleaner production approach. However, most of those trained no longer work for the municipality and are therefore not responsible for setting their new capacities into practice. Since no plans or databases were developed it cannot be expected that the municipality has been able to perform any follow-up of the subproject. As a response, the Honduran consultancy company Ingeniería y Ambiente de Sula, who collaborated closely with the subproject, has ensured that the project reports containing a set of recommendations (including recommendations for what procedures should be followed in order for an industry to receive an environmental permission, guidance on how to better perform follow-up monitoring, recommendations for self-monitoring as well as guidance and recommendations for how to adapt a cleaner production approach), have been distributed to the relevant units within Tegucigalpa municipality in an attempt to pass on the lessons learned to the city's new administration.

(Subproject 3) Question: Has the subproject resulted in a long-term strengthening of the information work performed within the municipality of Tegucigalpa concerning its communication with the citizens within the field of environment and solid waste?

Answer: Long-term strengthening, no. Short-term, yes. It is necessary to repeat that long-term ambitions are extremely hard to live up to due to the political realities in the country, which affect the municipal entities negatively resulting in that long-term planning and visionary thinking seldom receives much attention. In a short-term perspective, the municipality participated actively in the project and acquired new skills within strategic communication and on how to carry out an innovative and all-inclusive information campaign. Sadly, none of the municipal staff that was trained within this subproject are now to be found at the desks within the newly elected administration. However, it has proved obvious that several previous staff members that participated in the activities have benefited from the training and even though they have not remained within the municipality some of them occupy positions in other organizations of the society where the information acquired may prove equally useful to the beneficiary groups: the underprivileged. The subproject has moreover ensured that other institutions, NGOs and community organizations outside the municipal body have been trained in e.g. strategic communication. The passing on of information from these individuals to their respective organizations is a sustainable channel for the society.

And most importantly, since this subproject involved the civil society represented by two communities commonly referred to as marginal areas, a long-term strengthening in terms of capacities and individual self-esteem has been noted in the people that were interviewed in relation to this evaluation. The communities have a strong belief in the subproject and the waste collection campaigns that were rolled out within the subproject have received far more attention from the target group than any other previous campaign with a similar purpose.

Tangible results: Thorough studies of the environmental awareness and waste handling habits have been carried out in the two pilot areas before, during, and after the subproject was carried out. The statistic summaries clearly show that; there is less waste on the streets in these communities; the environmental awareness has increased; more people leave their household waste at the indicated pick-up spots or with the pick-up lorry if there is one; less people burn or throw waste on the streets; and the communities have from time to time organized their own waste-picking campaigns inspired by the project, using the slogan "gain your environment". Moreover, the youth has gained a new understanding of the relation

between waste and health problems, and according to the local health clinics in Villa Nueva and Carrizal the amount of skin and diarrhoea problems have decreased.

(Subproject 4) Question: Has the subproject led to acceptable environmental and health management and disposal of hospital waste in Tegucigalpa?

Answer: Yes, but it would be more accurate to say fairly acceptable. Many achievements have been made within this subproject, which has been quite complex and entailed a lot of hard work. In order to address the entire process involved in generation, separation, transportation and disposal of waste, the people involved in the implementation of the subproject have collaborated with a number of stakeholders involved in the different processes of the waste management. Further, the subproject has proved that the combination of practical hands-on measures and more in-depth analysis, strategic advice and institutional reform is a successful methodology, even though it requires its share of engagement from the project team. The tangible results of this project are several. The separation of dangerous waste has increased from 11% to 70% within the hospitals that participated in the subproject. The separation of waste in black and red bags, with common waste in the black ones and dangerous waste in the red ones; provision of an exclusive vehicle for hospital waste, transportation of waste in two different turns, the first turn for dangerous waste and the second turn for common one; definition of timetables for collection and transport routes, daily controls of the vehicle that collects the waste when leaving the hospital and at the entrance of the municipal dump site.

Moreover, the cost and implications of various alternatives for hospital waste management have been made known in relevant institutions (completely unknown before the start of the subproject). Cost awareness and accounting procedures at hospitals has improved through training and participation in cost assessments. And perhaps most importantly, the subproject renewed the Ministry of Health's interest in activating "Special technical regulation for the management of waste generated by health institutions" (*Reglamento Técnico Especial para el Manejo de los Desechos que se Generan en los Establecimientos de Salud*). Once the regulation enters into force, it will be applicable on national scale, in each and every health institution, hospital, clinic or medical centre.

The project as a whole

The idea of assisting Tegucigalpa after Mitch is to be commended. The commitment by the city of Stockholm to cooperate in the area of waste management caused some implementation difficulties to the Swedish personnel involved in the project since it was not part of their day-to-day responsibilities and was not included within their normal workload. Therefore, Swedish consultants had to be engaged to carry out the project tasks in collaboration with local actors and ensure that all subprojects were concluded accordingly. The implementation of the project had tremendous support after attaching Honduran consultants in subproject 2 and subproject 4.

The assistance provided by Swedish consultants was at the best-required level. The cooperation between Swedish and Honduran counterparts worked well as far as it was a stable staff in office. Since the exchange of staff after the elections is a normal procedure in the country, the long-term sustainability of the project is in jeopardy and might not give the expected results. It all depends on the political will of the Mayor and the executive officers of the municipality, something that appears difficult to obtain. Since the new administration have little or no interest in acknowledging the past local government achievements, the trained staff is no longer in charge of the implementation of the project, and the new staff is ignorant on what was done during the last four years or unwilling to continue the project objectives; it is not possible to affirm that the cooperation resulting from the twinning agreement has reached its purpose.

1. INTRODUCTION

For seven days in October 1998 Hurricane Mitch struck Honduras and left the country with a dreadful plight: 6,000 dead, between 8,000 – 10,000 missing and the displacement of 2.1 million people. In Tegucigalpa alone, 230 factories and workshops were lost. The hurricane provoked flooding, damaged aqueducts landslides, razed crops, devastated rainwater and sanitation systems and forced thousands of families to relocate.

The international community, including Sweden, offered assistance in the country's reconstruction of physical infrastructure and the rehabilitation of other sectors that were severely impacted by the hurricane.

The Swedish International Development Cooperation Agency (Sida) had increased its cooperation with Honduras prior to the disaster and the cooperation encompasses e.g. the social sectors such as housing, land rights and legalisation of landholdings, as well as the establishment of basic facilities in marginal areas. It also provides assistance in public administration and in the promotion of Human Rights.

Mitch manifested the precarious environmental conditions in the country, particularly in the capital Tegucigalpa.

Following the subsequent conference for donor countries that took place in Stockholm in 1999 and the Stockholm declaration from the same year, Tegucigalpa Municipality and Stockholm city made contact and a letter of intention was signed by both parties expressing the mutual interest of cooperation. The contact rendered a 'twinning' arrangement, which provided a foundation on which to establish institutional cooperation and the development of a project in which Stockholm would support institutional strengthening in Tegucigalpa in the areas of solid waste management and environment, as these areas had been identified as crucial after the passing of Mitch.

In January and February 2000, Stockholm municipality and SWECO International carried out a preliminary study of the damages resulting from the hurricane in Tegucigalpa, to further explore the areas in which Sweden could provide assistance. The pre study developed into a first project proposal in June of the same year. Swedish assistance was initially divided in five subprojects: Institutional capacity building and support in waste management (Subproject 1), Regulatory Supervision Program for Industrial Waste (Subproject 2), Municipal information focusing on solid waste and the environment (Subproject 3), Hospital waste management (Subproject 4), and Exchange of experiences in urban planning (Subproject 5). The latter subproject was cancelled due to the lack of appropriate personnel on behalf of Stockholm municipality and due to the doubt that was raised by Honduras representatives as to whether the component was necessary in the way it was first presented.

The four subprojects were implemented between June 2001 and October 2005. The "Joint Final Report in the Stockholm Tegucigalpa Cooperation, June 2001 – December 2005" contains a final agreement summarising the outcomes of the subprojects and the financial framework under which they were carried out. The document was revised and signed on the 24th of October 2005, thereby formally ending the project. (Appendix 7.3)

The main focus of this evaluation is to follow up on the objectives of the subprojects, being the following:

Subproject 1: To support and strengthen the municipality of Tegucigalpa, in developing its capacities as coordinators, planners and contractors of private companies for the collection of solid waste.

Subproject 2: To increase the knowledge about industrial waste within the responsible unit of the Municipality of Tegucigalpa and increase its supervision capacities.

Subproject 3: To on a long-term basis strengthen the information work of the municipality of Tegucigalpa in its communication with the citizens; furthermore increasing the participation and knowledge of the citizens in the environmental and solid waste sector.

Subproject 4: To assist in assuring that the management and disposal of hospital waste is done in a way that is not harmful to the human health or to the environment.

The present evaluation analyses the accomplishments of each subproject and the lessons learned by Sweden and Honduras; the level of sustainability of the subprojects; and the impact on the beneficiary groups as a result of the subprojects' implementation. Two types of beneficiary groups may be identified: At institutional level in terms of civil servants in the municipalities; and at a community level, especially relevant for Subproject 3 where the communities of Carrizal and Villa Nueva participated in both planning and implementation of the subproject (see Appendix 7.4 for the location of these areas). The evaluation further explores the extent to which the goals set out have been reached and which the tangible and non-tangible results are.

The results obtained in the implementation of the projects are compared with the objectives that were defined initially in the project proposal from 2000. These criteria allow the present paper to evaluate and consider the short and long-term impact of the subprojects.

This evaluation follows a Sida model and expects to provide recommendations that will prove useful for the implementation of similar projects elsewhere, and to contribute to an increased insight in the cooperation experiences benefiting the collaborating parties in the municipalities of Stockholm and Tegucigalpa or in other municipalities.

2. THE COOPERATION PROJECT

Tegucigalpa

Tegucigalpa city (or *Distrito Central*) is the capital of Honduras and the biggest city in the country. It is situated at 1000 metres in a mountainous region, in a narrow valley created by the river *Grande* or *Choluteca* near El Picacho hill. The figures of the population of Tegucigalpa range from 850,000 to 1, 6 million people depending on the source of information. Out of these, approximately 55%¹ live in impoverished neighbourhoods, often referred to as marginal areas. These areas characteristically lack both technical and social infrastructure, and are generally located on the slopes of the hills that surround the city.

2.1 BACKGROUND AND FOUNDATIONS OF THE STOCKHOLM-TEGUCIGALPA PROJECT

Solid Waste Management in Honduras and Tegucigalpa

Solid waste management is a serious environmental problem in urban Honduras. By the end of the 90s, 70% of the collection services for solid waste in the main cities of Honduras were functioning. In 1999 in Tegucigalpa, only 60% of the citizens could access solid waste collection services². The marginal areas lacked and continue to lack appropriate collection services. Out of the municipality's 97 classified neighbourhoods that were registered by Metroplan year 2001, (see appendix 7.5) there are 54 (marginal) areas that entirely lacked solid waste collection services.

Neither Tegucigalpa nor any other city in the country relies on a pertinent system for the final disposal of municipal waste. Nor is there an adequate system for the management of hazardous waste, hospital waste (although some hospitals have acquired their own autoclave in recent years), or industrial waste. Most factories burn their waste close to their property and subsequently send the burnt waste to the municipal dump site where it is mixed with common waste.

Littering in streets is due to several reasons: insufficient control by the municipality regarding waste generators, lack of civic consciousness, insufficient and irregular collection services. These deficiencies are due to the country's absence of necessary legislation and regulations, as well as the lack of control mechanisms for waste management.

The problems related to the situation of solid waste management in Tegucigalpa became even more obvious after hurricane Mitch, which left large quantities of debris in streets, clogged drains and provoked soiled water to flood. Illnesses associated with poor sanitation and the accumulation of waste close to human settlements was also reported to have increased. The marginal areas of the municipality were worst off due to their vulnerable location, its precarious infrastructure and residents who had no or few resources to recover from the disaster.

The pre-study that was carried out in the winter 1999/2000 provided a description and analysis of the situation with regards to waste management and the environment in the city. Moreover, the study defined a cooperation proposal to assist the city of Tegucigalpa. The major obstacles encountered in the pre-study that related to solid waste had to do with institutional and technical-operative deficiencies such as that:

¹ Based on a study carried out by Universidad de Honduras

² Pre-estudio para la cooperación entre Estocolmo y Tegucigalpa, 20 de feb. 2000

- Hazardous waste was not handled separately and there were no solutions available regarding how to handle this kind of waste, which continues to generate health and environmental problems.
- A significant part of the waste was not collected, partly due to precarious municipal services and partly due to ignorance among waste generators, including the civil society. As a result, large amounts of illegal waste were deposited in public spaces and as a result these areas deteriorated, damaging both environment and public health.
- Handling and management of the waste at the municipal dump site was not adequate. It produced toxic fumes that were harmful to the environment and to the human health. Another problem identified at this stage was the groundwater contamination as a result of residual liquids that seeped from the municipal dump site.
- The municipality's system in use for financing of the solid waste management was not sustainable. The service provided did not correspond with the amount paid by the taxpayer, neither did the expenses correspond to the real cost of the service provided by the municipality.

Political Organisation

The cooperation agreement between Stockholm and Tegucigalpa was carried out by *Stockholm Stad Renhållningsförvaltning* and the Gerencia General de la Alcaldia Municipal del Distrito Central (AMDC) of Tegucigalpa and its sub units that are in charge of the operation and handling of solid waste and environmental issues.

The cooperation agreement was initiated when Dr. Vilma R. de Castellanos of the *Partido Nacional* was in office as Mayor of Tegucigalpa.

National and municipal elections in Honduras are held every four years, which entails a widespread change of municipal personnel and technical staff. In January 2002 the municipal elections put the new candidates of the Partido Nacional into office and among them the new mayor Dr. Miguel Pastor. During his mandate the cooperation agreement between Stockholm and Tegucigalpa was implemented for a period that would end in October 2005. The most recent municipal elections on 27 November 2005, once again rendered a Partido Nacional victory, although the new mayor Ricardo Alvarez belongs to a different fraction from that of his predecessor, which had a certain effect on the projects.

Point of departure for the evaluation

The criteria that have been used are as follows:

To examine the implementation of the four subprojects, and to assess whether the Swedish and Honduran parties' objectives have been fulfilled:

- In relation to those drawn up at the inception of the project
- If they have been corrected or adjusted during the process of implementation, indicating the reasons that justify the changes
- Evaluate the level of sustainability achieved in the different subprojects and their impact on the target beneficiary groups.
- Evaluate whether the subprojects have achieved implementation of the objectives set out before them in the initial proposal of the cooperation agreement, and identify the results.
- Examine the benefits that have resulted from the cooperation based on the 'twinning' of the capitals Tegucigalpa and Stockholm.

2.2 SUBPROJECT 1: INSTITUTIONAL CAPACITY BUILDING AND SUPPORT IN WASTE MANAGEMENT

The purpose of the subproject: To support and strengthen the necessary institutional capacity in the municipality of Tegucigalpa, so that it can develop its ability of coordinating, planning and contracting private companies for the collection of solid waste.

Subproject 1 began in June 2001, procured by the Renhållningsförvaltningen of the City of Stockholm, and was carried out with technical support from SWECO. The Honduran counterpart was the Solid Waste Unit of the Tegucigalpa municipality and the working group responsible for implementing the activities of the subproject also included civil servants from *Unidad de Gestion Ambiental Municipal – UGAM – (now the Gerencia Ambiental)*.

The municipality has several units responsible for the management of solid waste. In the previous administration the UGAM was responsible for the supervision and monitoring of municipal waste management; the *Unidad de Desechos Solidos* for operational tasks; and the *Unidad de Servicios Sociales* for handling the issue of public health in relation to solid waste management.

At the end of the 90s the municipality of Tegucigalpa began to consider privatising the service of solid waste collection, which would result in a shift in responsibilities in the administration's pertinent units. In order to extend the privatisation of the collection service, the city of Tegucigalpa requested a loan from the Interamerican Development Bank (IDB).

When cooperation for the subproject began in 2001, the municipal collection of solid waste covered 75% of the serviced city area, and the remaining 25% was carried out by COSEMSA, a private Honduran company (The waste collection service did not cover all areas of the city). The city of Tegucigalpa needed to obtain the loan from the IDB in order to afford the extension of the collection service as had previously been proposed. As a prerequisite for granting the loan, the bank had asked Tegucigalpa Municipality to draw up a strategic plan for solid waste management, including a strategy to increase private sector participation.

The areas of work of Subproject 1 were as follows:

1. Formulating a strategy for the participation of the private sector in the collection of solid waste.
2. Identifying the modalities for contracting solid waste collection services.
3. Establishing a supervision unit.
4. Improving cost recovery

The Strategic Plan

- A strategic tool for increased private sector participation

Once the subproject began, supported by the Swedish consultants, the administration elaborated the strategic plan for the extension of the collection service with an increase in private sector participation; thereby fulfilling the basic condition for receiving the IDB loan. The bank subsequently disbursed the first instalment of 25% of the loan. The strategic plan was completed in September 2002.

In order to extend the collection services performed by the private sector, the Swedish consultants proposed a new strategy. The strategy involved different stages of the collection related services and would undergo a one year trial period. However, the City of Honduras did not follow the recommendations put forward and instead conceded a new eight-year contract with COSEMSA disregarding the new strategy. Nor did the contract with COSEMSA heed to the recommendation that the technical specifications had to be

strengthened. In addition, the contract adjudication to COSEMSA was taken without a tender bidding process. This unexpected decision taken by the AMDC created a difficult situation for the Swedish consultants involved in Subproject 1. Still, the new contract was beneficial for the municipality as it added 15% to the area already serviced which meant that when the subproject was finished, the private sector was responsible for the collection of 40% of the waste generated within the municipality.

According to the recommendations made by the subproject's work team, the privatisation process was based on the following:

- That the competition process was ensured to be fair and sustainable. Competition should be open and accessible to different contractors
- The solid waste management unit should have the responsibility of planning, selecting and supervising the contracted services.
- The municipality should have the power to produce contracts, to monitor and to enforce contractual agreements.
- The municipality should rely on a sustainable and transparent system to recover expenses and pay the private companies.

Modalities for contracting solid waste collection services

The conditions proposed by the Swedish part regarding the intervention of the private sector in solid waste management are based on the following assumptions:

- 1) That a private company be engaged for collection and transportation of waste during set time. The contract should be granted following competitive tender bidding.
- 2) The adjudication for the construction of new installations for waste disposal be given to a private company on a long term basis (the company should be responsible for the construction of the installations).
- 3) That the municipality allocates a franchise contract for waste collection in a specific area for a fixed period of time. The company should be able to recover its investments and benefit from tariffs.
- 4) That free competition between private companies for the concession of contracts should be established as a rule. Different companies should further be able to compete within the same area.

Of special interest was the collection of solid waste in the marginal areas, the poorest barrios of the city. In 2001, when the project began, 54 of these areas totally lacked a solid waste collection service. In 2003 this number was reduced to 46 as a direct outcome of the implementation of subproject 1. However, this means that there are still about 425,000 people without access to waste collection services.

One of the reasons for the deficiency of waste collection services in these areas is that the dwellings are considered illegal by the municipality, since the residents often do not hold ownership titles. These families do therefore not pay property -nor waste collection taxes. The level of services provided to areas with difficult access and problematic topography is lower still. In addition, the AMDC technical equipment has serious limitations and deficiencies.

The Strategic Plan proposed two alternatives for the waste collection service in the marginal areas. The contractor could:

- Either take direct responsibility for primary collection, or do this through a subcontractor (primary collection is when domestic waste is taken from the source to

certain collection points, and secondary collection refers to that company trucks should gather waste from the collection points and take it to the final disposition).

- Alternatively, to share the primary collection with an NGO or small company.

In both cases, the contractor should be responsible for secondary collection in his respective zone.

Once the strategic plan was approved, the mayor's office with assistance of the Swedish consultants, began preparing the process to extend the waste collection service by the private sector in the remaining 60% of the city area. In order to carry out the tender bidding process, three documents were drafted:

- 1 Pre-qualification documents
- 2 Tender bidding documents including instructions for the bidder and a legal framework for the tender bidding process, as well as a contract model, the legal conditions of the contract and technical specifications
- 3 Contract draft

Four companies participated in the pre-qualification competition although one of them did not provide the information requested by the municipality and therefore was not entitled to compete. The new contract contained a number of specifications to be taken into account by the company, such as geographical areas to be serviced, categories of waste, special services, etc. Special importance was put on including marginal areas in the collection route.

The municipality was held responsible for the preparation of the contracts appendices. These included:

- Reliable data on waste generation.
- Earmarks of the area to be serviced in the contract on a city map, indicating marginal areas and the areas with difficult access. Identification of the entities that produce large amounts of waste or more than one ton daily.
- A list of marginal areas indicating the relevant conditions for secondary collection, and
- Definition of each and every collection area: how often and what type of collection that was required, location of collection points for containers, capacity of containers, etc.

Establishment of a supervision unit

The strategic plan also proposed that, in the short term, a unit for supervision of contracted services should be created under the responsibility of a reformed Solid Waste Unit, technically strengthened and provided with appropriate logistic equipment. This new unit for the supervision of contracted services should supervise private and municipal operations. In addition, the plan proposes that the unit be in charge of tender bidding, concessions and supervisions, as well as being directly responsible for the implementation of the new biddings, the selection of companies and for negotiating contract agreements.

What regards the monitoring of waste collection services, the Swedish and Honduran consultants recommended a set of measures aimed at improving the amount of reports received by the existing supervisors. These staffs receive comments and public complaints about the services through three sources: telephone complaints (25%), the

media (25%) and the remaining 50% of the observations is obtained by direct and personal inspections by the inspectors themselves.

Improving cost recovery

The proposals for recovering costs were based on:

- Developing a system of financing sustainable costs
- Establishing a transparent, precise and complete system of accountancy of the costs.
- Creation of a separate account for the solid waste management in the municipality
- Improving the database for invoices and payments from residential dwellings, as well as improving the system for securing the payments in the aforementioned sector.
- Fixed tariffs to recover costs by using a system of crossed subsidies.

The greatest obstacle for the implementation on the proposed measures would be the lack of appropriate accountancy methods in the Unit of Solid Waste Management of the municipality.

The Swedish advisors also made a proposal to the Municipality of Tegucigalpa that the new landfill (the existing dump site was full) and management of the waste would be privatised and that the new landfill should be administered through a long-term contract. Moreover, the advisors proposed that the municipality be responsible for the location, the technical specifications and the design of the new landfill.

The old dump site as well as the new landfill is still managed by the municipality.

For the period of time that subproject 1 was implemented, 15 memorandums were drawn up by the working group that covered the period of time of cooperation following the process of implementation. The memos contain the assessments, measures and recommendations that were made and are necessary documents for the proposals to render the expected results. They include recommendations about how to:

- Achieve an integrated strategy for the management of solid waste
- How to increase the participation of the private sector in the collection of solid waste.
- Handle the bidding process for the collection of solid waste and the preparation of the bidding documentation
- Go about with the pre-qualification, bidding procedure and recuperation of costs and tariffs,
- Assure adequate technical specifications of the contract for the collection of solid waste and about the bidding document.

The main achievements of the subproject were the development of the Strategic Plan and the development of modalities for the participation of the private sector. The subproject was further of fundamental importance in the development and consolidation of the other subprojects since it was the first to be carried out and manifested the conditions of work between the Cities of Stockholm and Tegucigalpa.

2.3 SUBPROJECT 2: REGULATORY SUPERVISION PROGRAMME FOR INDUSTRIAL WASTE

Objective: Increase the knowledge about industrial waste within the responsible unit in the Municipality of Tegucigalpa and increase its supervision capacities

This subproject was implemented in two phases. The first phase was implemented between October 2001 and December 2003 under the joint responsibility of the city of Stockholm and the Municipality of Tegucigalpa, while SWECO International and the Honduran company IAdS implemented the second phase early in 2005.

The elections that took place in November 2001 disrupted the work of the municipality's officials and had an adverse effect on the implementation of the first phase of the subproject because of the significant break in work.

Before the beginning of the subprojects' execution, monitoring of the factories was under the mandate of UGAM (The Environmental Management Unit) and public complaints only related to disturbance due to noise and to pollution generated by factories. There was no existing strategy or work plan in the Environmental Unit and problems were solved on an ad hoc basis lacking a proper methodology.

The subproject's working group studied a number of processes by which factories could obtain an environmental licence. After 1993, the projects and factories were divided in three categories according to size, type of project or factory according to their type and foreseen environmental impact. Category 1 contains factories and projects that have little environmental impact, while the projects with a big impact belong to category 3.

Other activities that were undertaken in the subproject were workshops and seminars about the management of industrial waste, as well as supervisions and assessments of the 30 factories regarding the management of waste in each one of them (Appendix 7.8) The information about the industries was archived in folders, each with a record in order to share information between officials in the Municipality of Tegucigalpa.

In addition, a management programme about hazardous industrial waste was developed, although it was not implemented due to shortage of time.

By the end of the first implementation phase, the officials of the city of Tegucigalpa acknowledged that the development of the programme 'A Cleaner Production' had not taken place and the subproject had not included various technical recommendations that were contained in the initial plan of work.

The second phase carried out with the assistance of SWECO in collaboration with IAdS, included a capacity building workshop for officials of the municipality and the industry sector. This phase started with an inception seminar at UGAM's office where the weak points of industrial waste collection were identified as; the inspections and the follow-up of the supervision.

At the same time, there was a remarkable interest to increase the knowledge about cleaner production and pollution prevention. The seminar also showed that granting of licences and environmental impact assessments were well handled by the authorities. In general, the staffs were in good command on environmental legislation and how to handle the issue from a theoretical point of view. Therefore, the emphasis on capacity building was put on a more specific practical training. After this exercise, the seminar was followed by a series of activities regarding assessment and practical training in three industries of the city: Embutidos Europa, Embotelladora la Reina and Novem.

During the visits, the work group analyzed the production process of the industry and assessed its different aspects regarding the legal implications (environmental licence, supervision, raw materials, water used in the production process and in waste, drainage of rain water, air emissions, solid waste, potential environmental risks, etc).

The activities of sub-project 2 ended with SWECO's visit in January 2005. SWECO and IAdS's recommendations are shown below:

Process for granting environmental license

- Conditions stipulated in contracts must be binding and be applied before the environmental license is granted.
- The environmental license should be limited to environmental issues. Environmental conditions affecting health and hygiene should be treated independently.
- The acceptable quantity and quality of waste water in a specific factory should depend upon the possibility to reduce the polluting ingredients in it and ought to be regulated depending on the type of industry.
- Legislation has to include standards for air and soil emissions.

Monitoring of environmental management and industrial waste

- The continuation of the supervision should have a high priority for category factories as well as those in categories 2 and 3.
- A team of three or four inspectors together with a chief supervisor should be assigned this task within the municipality's environmental unit, to follow through the monitoring of the localised factories located in the areas of their municipal jurisdiction. The team would be provided with a vehicle for inspections and findings. The inspections should be reported to UGAM on a monthly basis.
- UGAM should draw up a plan on an annual basis for the continuation of the supervision.
- A system should be created in order to secure all documents and data needed for the furtherance of the supervision and kept at UGAM. The creation of a data base is advised.
- UGAM should report problems on a more regular basis to those factories that do not in comply with the regulations or that have no environmental permit. Moreover, UGAM must have the right to penalise those factories not fulfilling with the requirements for the proper management of the environment.

Cleaner Production

Cleaner Production (CP) is defined as "the continued practise of a preventive and integrated environmental strategy, applied to processes, products and services so that CP can be applied to processes used in any industry, to the products themselves and to various services offered in society." CP means in principle, to take measures at the source of production to reduce the environmental impact and at the same time as cutting down costs on raw materials, energy, water, etc. Industries adopting this strategy benefit not only from cutting expenses and increased profits, but also from the reputation they earn by showing a respectful relationship with the environment.

Great interest in the principles established by CP was shown both by the authorities and the factories that were inspected in the subproject, as well as by the industrial organizations. The working group found that the establishment of a CP centre is important in spite of the current

legislation which does not stipulate rules that regulate the emissions of sources to the atmosphere.

Summarizing, the recommendations regarding CP indicated the need to:

- Draft a project that introduces CP to Tegucigalpa.
- Research the possibilities of establishing a centre for CP
- Initiate a project to establish a Geographic Information System and a database to file information on the industries.
- Appropriately reform policies and regulations that currently determine industrial production and particularly to enforce the legislation dealing with emissions into the atmosphere

The development process of this subproject and the information regarding the first phase was put together in four memos by the first technical assistant. It compiles all the activities undertaken during the period June 2001 to the beginning of 2005. The final report, which includes the activities of the second phase, was compiled by SWECO and IAdS.

2.4 SUBPROJECT 3: MUNICIPAL INFORMATION FOCUSING ON SOLID WASTE AND THE ENVIRONMENT

Objective: long term reinforcement in communication by the Municipality of Tegucigalpa to its citizens and to increase their involvement and awareness regarding solid waste management and the environment.

Informing the citizens on solid waste management is a key duty of the municipality. Therefore, several municipal units had an active role in the implementation of the subproject. These were the Solid Waste Unit, the Social Services Unit, the Environmental Unit (UGAM), the Public Relations Unit, the Social Communications Unit and the Infrastructure Unit.

This subproject was officially started in September 2003, with officials from the municipality of Stockholm representing the Swedish part. During their first visit to Tegucigalpa on 23-25 November, 2003 they had several meetings with Honduran consultants, public officials from UGAM and with representatives from other units of the municipality. The Swedish officials were able to assess the existing conditions and the necessary prerequisites to start the project of cooperation.

Subproject 3 was modified after the first proposal. On one hand, this was due to staff changes in both Tegucigalpa and Stockholm. On the other hand those responsible for the subproject realised during the implementation process, that due to work policies within the Tegucigalpa municipality some of the activities initially suggested would not reach their targets.

The first team of consultants from the city of Stockholm had the following as a basis to work with;

In general terms, the initial objective of the project was to strengthen the municipal system's information about the environment as well as to develop internal means as to favour communication between the different units responsible for the management of solid waste disposal and the environment in the Municipality of Tegucigalpa. The results expected to be attained were specified in the project's original document, dated 17th June, 2000; and in that of the proposal of Subproject 3, dated 12th September, 2003. They were the following:

1. To procure long-term resources in order to strengthen and structure the municipality's channels of information to the citizens.

2. A development plan and a relevant policy based on information devised and presented to the municipal corporation.
3. A developed strategy for environmental information to be implemented.
4. To make a substantial effort to give the citizens environmental education.
5. To promote an informative campaign about waste products.

Before the subproject was initiated the aims above were modified to better suit the political realities. The Information Department in collaboration with the Public Cleansing Department of the city of Stockholm then formulated a new long-term strategy for the whole municipality of Tegucigalpa. The new objectives and results were as follows:

Objectives

- To develop a long-term plan for municipal information reinforcing the importance of informing the citizens in the frame of a democratic society.
- To increase the knowledge and commitment of communities in the municipality on issues related to solid waste and the environment.

Results

1. Implementation of a programme to reinforce management capacity in the long term and a strategy structured for public participation in the municipality.
2. That the Mayor's Office be informed of the development plan and strategy for citizen information.
3. Formulation and implementation of an informative strategy about the environment.
4. Implementation of a wide educational program for the citizens.
5. Completion of the informative campaign regarding solid waste.

However, the consultants of the city of Stockholm never applied the activities planned for achieving the expected results of the subproject. When the city of Stockholm decided not to continue their commitment in April 2004 the work plan for the subproject had not yet started.

Sida and the project's directive team that consisted of representatives from different units of Tegucigalpa Municipality, then opposed the city of Stockholm's project proposal stated above, due to the risk that it would be politicised.

The Swedish Embassy in Tegucigalpa then, requested Mr. Carlos Rivas (a Honduran consultant at the time) to examine the project proposal together with the staff at UGAM, in order to reformulate the objectives of the subproject so that they more accurately reflected the aims of Sida and the municipality of Stockholm. The most important result of their investigation was that the internal activities of the municipality should stand apart from public relations. The analysis made by Mr. Rivas also pointed out the importance that all the parties involved understood the project as a communicative process.

The municipality of Stockholm contracted Global Reporting to assist in the implementation of Subproject 3 in June 2004. Global Reporting structured the work, originally including four components (three were original and the fourth was added as part of an information campaign) The new overall goal was set to be; "On a long-term basis strengthen the information work of the municipality of Tegucigalpa in its communication with the citizens; furthermore increasing the participation and knowledge of the citizens, in the environmental and solid waste sector", and the new set of components were:

- Increase the capacity to manage the communication between those involved in the subproject.
- An informative campaign in two pilot areas in the city of Tegucigalpa: Carrizal and Villa Nueva (see map, appendix 7.4)

- A new long-term strategy for public communication about solid waste management in the city (which was ultimately not carried out due to the municipality's lack of interest and resources).
- A youth exchange programme between Tegucigalpa and Stockholm.

Instead of formulating a long-term strategy for public communication, the project emphasised on giving more responsibility to the civil society as an alternative long-term strategy.

Both before the subproject's initiation and during the course of it, eight workshops were held on strategic communication. Taking part in the workshops were the agencies and organisms concerned in the subject: UN agencies, municipal departments, NGOs, Catholic University, heads and committees of the neighbourhoods under development, etc. Besides from the workshops, presentations and talks that were held about strategic communication for the inspectors and staff of the Solid Waste Unit of the municipality and for the heads and key figures in charge of developing areas.

The initial informative workshop included a session about the relationship between the media and public relations, communication with the citizens and strategic communication. The knowledge acquired in the workshops was later applied to the information campaign and during the youth exchange programme.

The information campaign served as a pilot project to identify a better strategy to change the citizens' attitude towards the management of solid waste and the cleanliness of their environment. The campaign also provided the municipal staff with the opportunity to acquire experience of strategic communication and to apply what they had learnt in the workshops to the subproject.

A complement to the information campaign was the youth exchange programme between Honduran NGO *Compartir* located in Villa Nueva, and students from Stockholm's Global High School. The purpose of the exchange was to identify and understand the similarities of the issues that concern both cities in relation to awareness of waste disposal and the environment. The results of the exchange were exhibited in both cities.

The strategy applied by the Swedish consultancy team was to create the conditions for dialogue between the involved parties. The intention was to establish structures for the exchange of opinions and interests through a campaign on two levels, presented as follows:

Municipal Level

Representatives of the departments related to solid waste disposal and the environment formed a work team responsible for planning and implementing the subproject's activities. The team also included a member from the NGO *Compartir*, who represented the neighbourhoods under development.

Community Level

One of the first tasks of the subproject was to identify two areas or neighbourhoods under development where to implement the innovative pilot project. The pilot areas chosen were Carrizal in the north-eastern part of the city and Villa Nueva in west (Appendix 7.4). The criterion for choosing these areas was that both should be marginal areas in terms of being poor; that they had approximately the same number of inhabitants and similar problems concerning waste collection; and similar levels of environmental degradation. Both communities further had representatives to organise the subproject's activities on a local level. The work team took into account that Villa Nueva had a NGO, whilst Carrizal did not. The community leaders created neighbourhood committees or organizations consisting of members of religious congregations, youth and cultural groups, health centres, schools, etc. These committees took on the responsibility to execute the subproject's activities in their

respective neighbourhoods. After forming these committees, the Swedish Global Reporting consultants organised a one-day workshop to introduce the committees to the idea of the project, learn about their ideas on how to carry out the activities, and to give them support in preparing an implementation plan.

Apart from the workshops, seminars and the various meetings held, the strategy for achieving the goals of the project was to empower the communities and to assist them in making use of the new experiences putting the plan in practice. The work team coordinating the execution of the tasks on a municipal level, decided that the campaign had to have a positive image, particularly to make it attractive to children, youth and the media. Therefore the campaign mainly focused on garbage collection, on a competition of rap music, football, the use of recycled materials in art work, and through theatre activities and poetry. Behind this concept was the intention of giving the campaign a positive spirit.

One way of putting the basic idea behind the cooperation programme into action, was to use the concept of twinning cities. This helped develop a real connection between the participating groups and people involved in the project, and promoted a common awareness which was defined as the pride of being 'capitalino', or, an inhabitant of the capital. This concept resulted in the slogan: 'Tegucigalpa-Stockholm, the pride of being "capitalino"'. The campaign itself was named 'Juego Limpio' (Clean Game) and 'Win your Environment'.

A study trip to Stockholm took place during the implementation of the subproject where several visits included Sida's Information Department. Apart from the workshops, specific activities in the subproject's programme included particular events such as a lottery, garbage collection and cleansing, a football tournament, various music competitions, poetry and art exhibitions. A specific outcome of these activities was a CD compiling the ten best songs of the competition. A total of 42 teams took part in the football tournament. They were divided into categories depending on their age group and included both boys' and girls' teams.

The relations with the radio and the press, as well as with the TV channels were especially good and served as excellent advertisement for the campaign. The campaign's final event took place in the city's central square, where the prizes were awarded to the winners of each competition.

2.5 SUBPROJECT 4: HOSPITAL WASTE MANAGEMENT

Objective: To manage and dispose hospital solid waste in such a way that it does not harm human health or the environment.

The implementation of this subproject was carried out by treating it integrally on all levels of involvement, involving the hospital staff responsible of disposing of solid waste to the highest levels of the Ministry of Health. During the implementation process, six reports on diagnostics and proposals for initiatives were produced, as well as five reports on the most relevant workshops dealing with capacity building.

Subproject 4 begun in September 2003. At the beginning of 2004 SWECO International was commissioned to carry it out in collaboration with the relevant units in the municipal administration, the Ministry's Health Secretary, and the Honduran consultancy Ingenieria y Ambiente de Sula (IAdS). SWECO also relied on two Swedish consultants: the financial consultant Sverker Snidare AB, and an expert from the Karolinska University Hospital.

Six hospitals and a health care centre were assessed as pilot cases and were included as part of the subproject. These centres were selected according to different criteria in order to achieve a representative picture of the city's health care situation.

These were the criteria for selecting hospitals for the pilot project:

- Type of administration sector: public, private, social security
- Size
- Location
- Medical services supplied
- Amount of waste generated
- Previous experience with waste management

As a whole, the selected pilot hospitals generate approximately 80% of the city's total hospital waste. They can be divided into the following categories:

- Public: Hospital Escuela, Hospital San Felipe, Instituto Nacional del Torax and Centro de Salud Suazo.
- Private: Hospital Militar and Hospital San Jorge.
- Honduran Institute for Social Security: Hospital de Especialidades (La Granja neighbourhood)

The pilot research on these health care centres was documented in separate reports produced by IAdS. These documents include a detailed analysis of the handling of solid waste following its course step by step: separation and labelling, intermediary storage, collection and internal transportation, temporary storage and transportation, and final disposal. The reports also show the amount of waste generated in 24 hours (red bags and black bags were weighed on the dump site's scale and this figure was compared to the number of beds occupied during that day (for hospitals) or alternatively, with the number of out-patients attended (in the health centres).

It is evident that the separation of dangerous waste has increased since the subproject started, as well as transportation and final disposal of hazardous hospital waste has improved. Moreover, cost awareness and accounting procedures at hospitals have improved, as well as have the awareness of the cost and implications of various alternatives for hospital waste management. The subproject further assisted in that the Ministry of Health took new interest in activating a "Special technical regulation for the management of waste generated by health institutions".

Each report on the health centres includes observations, conclusions and recommendations as well as progress indicators. The analyses and conclusions of the pilot cases identified the factors that need consideration in order to achieve a sustainable development process:

- Participation and support from the institution's directorate.
- Appointment of an internal coordinator for the hospital exclusively responsible for the management of hospital waste (supervision and drafting of reports, staff training, and formulation of instructions).
- Capacity building and provision of information to the staff according to their role in the waste management process at all levels. Capacity building must be on-going to prevent discontinuity caused by staff rotation.
- The areas where hospital waste is generated must be clearly marked.
- Correct communication of the pilot study's results to each respective health centre brings better waste management.
- Assigning the resources needed (staff and financial) to ensure the sound management of waste.
- Setting a time frame for establishing a functional system adequate for each institution.

Increased professional capacity and awareness where the overall key issues even at the workshops that were led by the consultants at the outset of the subproject. The activities concerned were:

- The full participation of the work team and other relevant members in all the activities related to the subproject to ensure its continued development. This consolidates the creation of a cross-institutional team.
- Workshops were held to train and instruct hospital staff to complement the pilot projects.
- The training and education of hospital staff was an integral part of sub-project 4's activities.
- Cross-institutional workshops were held to discuss common issues in a comprehensive manner.
- Specific training (in different forms and dealing with various subjects) was also held for the staff involved.
- Meetings with executive officials (from ministries, the Mayor's Office, executive secretaries/general managers from the municipality).
- A two-week study tour to Stockholm included all the aspects of hospital waste management in Sweden.

During the subproject's implementation, the professional capacity building of those dealing with waste management, and the sorting of common and hazardous waste increased (directly and indirectly) to over a thousand people. The issues dealt with in the workshops and various meetings are listed below (included is the number of people who received primary and secondary capacity building):

- Handling of all types of hospital waste including administration of the subproject, 8 people.
- Handling of hospital waste in the health centres, 200 people on a primary level and 800 on a secondary level (staff instructed by those who received firsthand training)
- Control and execution of contractual agreements, 6 people.
- Specific primary responsibilities in the treatment of waste (first steps in the disposal process) including the use of control forms, etc. 15 people on a primary level and 50 on a secondary level.
- Accountancy for hospital budgets, 5 people.
- Financing system, 40 people.
- Knowledge and awareness of the crucial issues that affect the management of hospital waste, 80 people.

General recommendations of Subproject 4 were made by IAdS and SWECO and suggest the following:

- To establish a network of coordinators constituted by those responsible for waste management in each hospital and health centre.
- Monitoring of the external transportation of hazardous waste. This must be included in the waste management plan to ensure safe control throughout the process of disposal.

3. FINDINGS

3.1 GENERAL FINDINGS

Out of the five original subprojects defined in the first project proposal, 'Joint Work on the Environment - Stockholm and Tegucigalpa'; Subprojects 1, 3 and 4 were completed on schedule; sub-project 2 was extended before it was completed, and sub-project 5 was never implemented. The satisfactory completion of the first two subprojects determined the commencement of the two remaining subprojects. The objective of sub-project 5, 'Exchange of experience in the sphere of urban planning', was to 'reinforce the municipality's work in the urban planning area with the aim to provide the city with a long term development plan and supplying it with basic infrastructure'. The reasons behind the decision of ceasing this component are commented below.

Cancellation of the Fifth Subproject

Subproject 5, which was to back the municipal unit responsible for the physical planning of Tegucigalpa, was ultimately discarded by both municipalities and excluded from the cooperation programme. The reasons cited for this decision was that the municipality of Stockholm was not equipped with the necessary available means to take on the task, and that the Honduran counterpart did not consider any help was needed in this area.

Still, it was clear that the municipality of Tegucigalpa needs to strengthen its professional capacity building in physical planning and an exchange of experience in this area would have been beneficial considering the common elements in both cities: the same population, similar physical constraints (hills/steep slopes and valleys in one case, and islands in the other) and the implication of these conditions for their infrastructure, as well as the large territorial extension of the cities.

The Master Plan for the Metropolitan Area (EDOM) and the Metropolitan Development Plan for the Central District (Metroplan) was formulated in the 1970s, and established the guidelines for the spatial development of the city at two levels: regional and metropolitan. The proposals of Metroplan has further not been followed, resulting in anarchic growth and unplanned occupation of the city area. Recently, a new structure plan has been prepared for organization of the urban space. The Draft Development Plan for Tegucigalpa would certainly had benefitted from the knowledge and experience of the urban planners working in the municipality of Stockholm, if language barriers and the participation of Swedish urban planners would have been facilitated for the duration of a reasonable period.

Discontinuity and transference of information

The municipal elections held every four years imply a change of government in the Mayor's Office, and often of some (and sometimes all) of the head officials and administrators in the different units of the municipality. Most officials are fired and new people take their posts. As a rule, the old employees take with them their knowledge and experience, including the work documents that ought to be property of the municipality. Transfer of information between outgoing and incoming officials is non-existent and it is not unusual that when interviewed, new and old officials give contradictory answers. The little or non-existent information about the activities of the different units in the municipality, whether printed or digital, obstructs the continuity of operational management.

The new posts, at all levels, may be occupied by persons without the experience or the proper knowledge of the issues handled by their unit. These are positions gained through political merits and not through professional ability or experience. If these new public officials have personal qualities or support of close advisers that allow them to overcome these deficiencies, this unfavourable situation could be overcome in time.

Historically, with the election of a new mayor, the person that holds the position of Town Clerk (Gerente General), as well as the unit leaders is changed. In the elections that took place at the end of 2005, two fractions within the same party (Partido Nacional) ran for the Mayor's Office. Both have their own interest groups and support and are in conflict with each other. The new municipal administration has replaced the former staff and put persons of their trust in the executive posts. This fact has had a negative effect on the continuity of the expected results of the subprojects and therefore its future implementation and sustainability. Several of the new heads of the municipality's units denied having received the information and experiences of the former administration related to the Stockholm-Tegucigalpa cooperation, whether it was verbal, digital or printed information. Since there has not been a transfer of knowledge or experiences gained during the project's implementation, the sustainability of the project is jeopardised. This is the result of professional and political irresponsibility based on political and personal interests, which obstruct the municipal capacity of serving the community.

Impact of the election campaign

The practice of the national and municipal politics in Honduras highly affects the citizens. The election periods affect the activities of the highest posts of the executive power to the lowest levels of the population. The change of government causes the dismissal of those public officials that supported the losing candidate. This happens every election and each time it results in a general change of the public officials. An important number of the new office bearers take charge of their posts for the first time. This discontinuity or rotation has a very negative effect on the normal operation of the municipality.

Continuity, sustainability and administrative immobility

In order to follow up on the results of the four subprojects it is necessary that there is an explicit commitment to take on board the goals of the project and be responsible of following it through. The subprojects of the cooperation programme contain proposals of short and long term results. If good will and commitment does not exist within the Mayor's Office to follow it through it seems very difficult that the project will have the impact that was desired.

Administrative mobility or rotation is an endemic problem of the governmental system that, at the moment, seems to have no solution. Until a solution is found, the projects of the type like those in the plan of cooperation between Tegucigalpa and Stockholm have no guarantee of continuity or to be sustained in the long term.

Long distance cooperation

Already before the implementation began, various problems materialised which interfered with the cooperation. The decision of twinning the cities of Stockholm and Tegucigalpa meant that both cities would benefit from each other's experiences and knowledge. However, Tegucigalpa was almost exclusively the beneficiary of this exchange due to the precarious economic situation of the country and due to the limited technological resources, especially during the recovery period after Hurricane Mitch.

The political decision to carry out the project was taken without taking into consideration that those officials from Stockholm in managerial posts might not be able to stay away from their original posts for prolonged periods of time, meaning that they would have to leave their professional commitments indefinitely. The twinning of the cities and the manner in which the implementation was designed, has required a considerable amount of trips by the Swedish consultants involved in its execution. Consultancy visits as well as the study tours to Stockholm by Honduran consultants have resulted in a high expense due to the distance separating the countries.

Institutional cooperation

The commitment brought about by twinning of the two cities signifies not only technical assistance, but also a political and professional relationship. The inter-institutional relationship between municipalities has not achieved fulfilling results if comparing with the initial goals, and the exchange of knowledge between the respective administrations as such has been on a minimum level. In spite of this, the experiences gained with the inter-institutional cooperation have resulted in a greater understanding of the existing problems and have identified possible solutions.

Exchange of knowledge between public officials

Considering the professional exchange, it must be acknowledged that the relationship between public officials and experts has been beneficial, primarily on a personal level rather than on an institutional level.

The study tours to Stockholm and the Swedish consultants' visit to Tegucigalpa have offered both parties new experiences and unexpected beneficial solutions. It is worth mentioning that the discontinuity in human resources results in drainage of knowledge and experience, which naturally does not benefit the institution in the long run. This discontinuity does not allow for an institutional 'memory'.

Hierarchies

A negative effect of the established mechanism frame in which the political decisions are taken is the pyramidal, or rather, vertical structure of power in Honduras. This affects the entire executive and legislative structure of the country and is ultimately motivated by personal, vested interests and not by caring to supply for the vast number of the citizens (more than half the population), who live under the poverty line.

The decision-making structure from the top leadership to those at the base, who usually act autocratically, is contrary to the democratic principles that are promoted by the Swedish cooperation and that are at the basis of the cooperation itself. The Swedish government hopes that the benefits of Sida's cooperation in Honduras will favour the large quantity of underprivileged population, especially that 'the social sectors dealing with health, water, sanitation and social infrastructure should benefit the poorest. At the same time, the Swedish cooperation should endorse public administration and human rights'.

The Language Barrier

The communication between professionals and on a political level and/or by decision-making officials should flow easily in order to fully understand the subjects discussed and the decisions made, particularly when dealing with subject matters with specific terminology in a specialised field. The public officers of the municipality of Stockholm had limited knowledge of Spanish and in the municipality of Tegucigalpa not all heads of units or officers in important posts commanded the English language. This factor had not been considered enough when starting up the cooperation; however, the technical advisors generally had good knowledge's in the Spanish language. Still, in subproject two communication was an obstacle since the technical adviser did not have sufficient skills in the Spanish language.

The Spanish International Cooperation Agency Programme (AECI)

The Spanish International Cooperation Agency started an aid programme for the Municipality of Tegucigalpa in the Valley of Amaratéca. The valley is located within the geographical boundaries of the city.

El EDOM considered the development of the Valley of Amaratéca as an industrial area outside the centre of Tegucigalpa, but neither the directives of the scheme nor those in Metroplan were followed. One of the aftermaths of hurricane Mitch was that thousands of displaced families were relocated into this area. At the same time, new industrial settlements

developed in the area. AECI commissioned projects to Spanish consultancies very similar to those resulting from twinning Tegucigalpa and Stockholm, like a structure plan for the Valley of Amaratéca, a programme for Municipal capacity building and local development of Honduras and a Management Plan for the Solid Waste of the Valley of Amaratéca. Especially the latter two projects have great similarities to the programme financed by Sida.

In 2001 the Spanish project's team presented a proposal which included a conceptual design for the integral management of solid waste. The proposal especially contemplated human settlements and industries. CONTECNICA, the same Spanish consultancy group that drafted the proposal in 2001, updated the report in 2005. Both the structure plan and the one for solid waste management are available in digital format.

The contact between the AECI's representatives in Tegucigalpa and the Swedish consultants was limited, although there was one meeting in March 2003. The lack of cooperation and contact before that meeting may be due to deficient coordination by the municipality of Tegucigalpa and perhaps by AECI and Sida as well.

3.2 SPECIFIC OBSERVATIONS FOR EACH SUBPROJECT

The proposed goals and the findings for each subproject are described below:

3.2.1 SUBPROJECT 1: INSTITUTIONAL CAPACITY BUILDING AND SUPPORT IN WASTE MANAGEMENT.

- *Creation of a privatisation programme for the solid waste collection services*

Between January 2002 and December 2005, a tender was held for the waste collection in the remaining 60% of Tegucigalpa's serviced area and was awarded to a private company. However, since the new municipal government came into office at the beginning of 2006, they have not yet approved the terms of the contract of the company that won the tender, claiming among other things that the price of the service scheme to be rendered is too high. The company referred to, seems to be backed by COSEMSA, which raises doubts about the service quality since no competition will exist between the companies. A monopoly emerges which damages and obstructs service quality. Another issue that adds doubts as to the legitimacy of the acquisition of the service by the new company is the fact that in the last elections, the head of COSEMSA was the candidate for Mayor of Tegucigalpa at the same time as Dr. Miguel Pastor was running for the president post of the Republic. Both candidates belong to the same political party and possibly have common interests beyond political matters.

- *Implementation of a system for monitoring and evaluating activities dealing with solid waste management.*

During the mandate of Dr. Miguel Pastor, the Mayor's Office has improved its internal undertakings, reinforced the supervising team and the Customer Service Office. This effort has shown the determination to meet the demands of the Strategic Plan. The daily inspections have improved significantly and the scale for weighing waste now belongs to the municipality, which greatly aids in supervising the amount of waste actually being collected. However, these improvements have not contributed sufficiently to implementing the system for monitoring and evaluation. The basis study exists, but the recommendations derived from it have not been applied.

- *Assistance and capacity building of officials in the Mayor's Office to devise a new system for tariffs and taxes.*

The recommendation for creating a separate account system for the Solid Waste Unit has been implemented. There is now one account for incomes and another one for expenditures, where the accountancy is run separately. The capacity building component has been limited due to there not being many staff members to train; however, the financial chief officer did receive training.

- *Establishment of an operating management plan for solid waste.*

This was done. The subproject assisted in the formulation of various components of the Strategic Plan. Among other things, it contributed in fixing a plan for solid waste management in areas where there are no topographical impediments, as well as giving management directives for the rest of the urban area.

- *Establishment of a municipal policy that delegates and coordinates the implementation of the Strategic Plan among the municipality's different units.*

This was not done. The Strategic Plan sets down an important number of prerequisites for its integral operation. The coordination and delegation of responsibilities was drawn up by the previous municipal government and has not been implemented by the newly elected one.

- *Establishment of a strategy for providing solid waste collection services to marginal areas. This is part of the plan for solid waste management.*

The subproject's work team has tried to implement the strategy, and the inclusion of eight additional marginal areas in the waste collection routes was a significant success even though short-lived, and unfortunately the implementation plan for the marginal areas was not followed up upon after the end of the project.

The Strategic Plan's long-term projections are for private companies to collect 100% of the waste: COSEMSA in the southeast and the remaining areas by another company.

In developing areas where irregular topography prevents the access of trucks or other collecting vehicles, the Plan indicates that:

1. COSEMSA will perform the task of primary and secondary collection.
2. Where AMDC carries out the primary collection, the newly contracted company will be in charge of the secondary collection.

Where the waste collection can be carried out without impediments, the Strategic Plan indicates clearly how the service will be carried out. However, the plan is ambiguous in the case of the developing areas. This is because the solution for primary collection supposedly relies on the creation of small private companies, which presently do not exist.

- *Establishment of a system for cleansing and collection in the city that lays the basis for the implementation of the new Strategic Plan*

The collection service has not notably improved, since no new private operator has been contracted to manage the remaining 60% of the city. However, it has been noted that the total collected amount of waste per day has increased from 406 tons/day in 2001 to 519 tons/day in 2003, equivalent to an increase of approximately 30%, which is a good indication and probably an outcome of the project.

Another component of the Strategic Plan: A social plan for *pepenadores* and children.

The Strategic Plan stipulates that AMDC must contract a consultant to develop a social plan for *pepenadores* at the end of 2002, but this has not been done. One of the reasons given for this was that the municipal unit responsible for contracting claimed that 75% of the *pepenadores* did not legally exist. The unit's only undertaking was an inquiry into the social status of the *pepenadores*. After this inquiry, no further activities related to the development of the *pepenadores* took place under the Strategic Plan. However, there are other cooperation agencies and NGOs in Tegucigalpa that are working on improving the conditions for this group.

An issue not directly dealt with in the subproject is to solve the presence and labour of children in the municipal dump. Some of the men sorting through the waste bring their children along to help out in the task. The Social Services Unit is responsible for producing a strategy to prohibit the presence of children at the dump and for the reinsertion of this group into the school system.

The environmental impact of the Strategic Plan

The adoption of the Strategic Plan by the Mayor's Office was to make positive progress to the environmental quality in the whole city. The privatisation of the collection and transportation system, the street cleaning, as well as the contracting of small companies in the developing areas for waste collection, would contribute to a cleaner system and management of the service and in a general, improvement in hygiene and sanitary conditions. This would be the case especially in the developing areas and also at the dump, where conditions are a health hazard to those working there. (*pepenadores* and service staff). The Plan has not been fully implemented, which means that the environmental conditions have not changed.

No additional activities as proposed in the Strategic Plan were implemented from the second half of municipal government's term in 2004-2005, and instead work on developing the prequalification documents kept going. Some measures carried out during this period were as well contradictory to those already taken (like in the case of the demolished chimneys that had been built to mitigate atmospheric pollution but never were used).

The subproject was fundamental in developing and consolidating the other subprojects since it was the first one in being carried out and was the vehicle for developing a work system between the municipalities of Stockholm and Tegucigalpa.

3.2.2 SUBPROJECT 2: INDUSTRIAL WASTE MANAGEMENT

During the first phase of the subproject, coordinated by the city of Stockholm, a number of activities took place which included capacity building workshops, short courses, a study trip to Stockholm, and the inspection of 30 factories. However, what could be extracted from the final report of this phase was that the planned training in cleaner production methods and some of the technical advice originally planned, were not implemented. This resulted in a second phase of the subproject headed by SWECO in collaboration with IAdS. Of the 30 factories visited during the first phase, 10 were chosen for further study and 3 of them were analysed in detail.

- *Programme for Training UGAM Staff in Supervising and Capacity Building*

During the two implementation phases the sources of hazardous waste were identified and a general analysis was made of the situation. Visits to the factories were part of the project's exercise. Some ten people participated in the Supervision and Capacity Building Programme (for control and monitoring). This was then carried out emphasising on a programme for cleaner production.

- *Supervision and evaluation of 30 factories*

The staffs of UGAM participating in the subproject, along with the factory visits confirm that the waste management was supervised, but was not evaluated in depth.

- *Creation of a supervision plan and a management plan for industrial waste*

This has not yet been achieved. Criteria for correct waste management were established during the inspection of these pilot factories. However, criteria must still be set for making final disposal hazard-free, both to the environment and the human population.

- *Reinforcement of Environmental Management*

The UGAM staff was trained during the implementation of the subproject. However, the negative aspect of the rotating or terminated staff that was involved in it endangers the achievements so far. Capacity building of staff must be continued by the municipal authorities if the results are to be sustained. The change of staff in the municipality has been negative for implementing the capacity building strategy.

3.2.3 SUBPROJECT 3: MUNICIPAL INFORMATION FOCUSING ON SOLID WASTE AND THE ENVIRONMENT

Proposed Objectives of the subproject: A long-term reinforcement in the communication between the municipality and the population. In addition, public participation should increase as well as should the levels of public information regarding solid waste and the environment.

The inertia that was felt between September 2003 and April 2004 resulted in the discontinuation of the subproject on behalf of the municipality of Stockholm, due to lack of resources on their part. To overcome this obstacle, the Swedish consultancy company Global Report was contracted to carry out the subproject.

The objective has been partially achieved: Without doubt the level of information made available to the citizens has improved since the subproject was first implemented. Popular participation and knowledge concerning the environment and solid waste has also increased. The positive attitudes of community representatives that participated in the project have been noted in the marginal areas and municipal officials have made contact with them for the first time. In general, those who were involved in the subproject are very pleased with its implementation. All interviewed agree on the positive change in people's attitudes. The community in Villa Nueva has organised a series of campaigns themselves and the inhabitants of both areas are much more aware of keeping their surroundings clean.

Proposed objectives:

- *Increased knowledge about long-term strategic communication in municipal units, individuals and the organisations taking part in the subproject*

In general, the campaign was clearly evaluated by the community representatives and NGOs. A comment by one community member was "it was a campaign that brought awareness about the environment since the community was directly involved in it, not like others which have faded away on billboards and in TV advertisements". The attitude of those officials from the Mayor's Office involved in the subproject was also positive. They have also stated that all the

training and capacity building workshops were well received by the Mayor's Office. However, it must be noted that after the elections in 2005 almost all the officials that took part in the training are no longer in their posts.

- *Changes in the attitude towards solid waste and garbage, focusing on two selected areas in Tegucigalpa*

All the individuals and community representatives interviewed for this evaluation have remarked on the subproject positively. They maintain that environmental awareness and the determination to keep their surroundings clean has grown without doubt in the areas of Carrizal and Villa Nueva. A larger number of people handle their household waste more appropriately by taking it to collection points or to the so called *tren de aseo*, and at the same time fewer people burn waste in these areas. Additionally, there has been a decrease of illnesses related to unsanitary conditions in Carrizal and Villa Nueva.

Community leaders also stated that the subproject, and in particular *Juego Limpio*, did not only improve attitudes towards waste management, but also developed their own skills in project management and in cooperating with other parties. In addition to this, the residents' self-esteem in these areas have increased.

The information obtained from the Statistics Department of the Municipality of Tegucigalpa confirms these results. The department has monitored the implementation of the subproject with the support of UGAM staff and consultants of Global Reporting. A base study of both selected areas was carried out before and after the implementation of the subproject.

The Statistics Department came to the following conclusions:

- The number of people with knowledge in handling solid waste has increased by approximately 100%.
- *Juego Limpio* was successful in its objective to involve the population in taking action to making their environment cleaner. The result of the initiative was that the population was more motivated to take part in cleaning activities and the responsible disposal of waste,
- The residents of the two areas consider that *Juego Limpio* has made a positive change in their communities and that the contribution is a permanent one.
- According to the residents of these areas, these were the most important achievements: the areas' improved appearance, the knowledge acquired about the dangers related to solid waste, the excellent community participation and the increased knowledge among youth about matters related to solid waste.
- At the outset of the project the vast majority of citizens considered it to be the duty of the Mayor's Office to keep the city's environs clean. In the last survey, a large number of people maintained that residents themselves also should be responsible for cleanliness. This was the campaign's greatest accomplishment.

However, it should be pointed out that a great number of people have not yet been able to participate in the project, or receive information. There is also the need to continue the activities to make the initiative sustainable. The level of environmental education has risen in some of the schools of Villa Nueva and Carrizal (this is also covered by the Statistics Department), although they still have a long road ahead before reaching the desired levels of environmental consciousness.

- *Exchange of knowledge and experiences on managing strategic communication campaigns*

The work team, including representatives from other units in the Mayor's Office, UN representatives and university students, received a wide range of information and capacity building on how to carry out strategic communication campaigns. The exchange of experiences had taken place almost exclusively through workshops and training sessions organised by the work team. Participants in the subproject also benefited from taking part in other activities such as designated cleaning days, football tournaments, music and art competitions, a CD recording and interaction with the media.

- *Ensure that the municipality's activities are strengthened in the long term by the experiences acquired in the project.*

The experiences were incorporated into the municipality's activities during the implementation of the subproject and while the work team was active. Meetings were held with other units of the Mayor's Office, in which there was a substantial exchange of experiences. However, due to staff changes in the municipality, it should be noted that the lessons learned have been lost. The scarce time for implementation forced the team to work with the most committed people. The capacity building was given to individuals, but could not be extended to the rest of the institution, or to create an 'institutional memory'.

- *Reinforce the contacts and exchange between the municipality, the private sector and civil society*

The subprojects encouraged a range of new relationships between the communities and the municipality. However, these relationships were limited within the work team only. The lack of interest and communication on the part of the municipality must be pointed out as a reason that has impeded contact between the parties. This has been highlighted especially in the private sector where there seems to exist no interest or understanding of the benefits that can be obtained from cooperation. For example, Mc Donalds has been approached with no positive response on their part.

- *Promote the creation of a foundation similar to 'Keep Sweden Clean'*

The creation of such a foundation was promoted and was considered to have a lot of potential, as well as there were people who were notably inspired to initiate something similar in Tegucigalpa. However, due to the private sector's lack of interest and limited time frame of the consultancies, it was not possible –nor planned –to come up with concrete results.

Summing up, this subproject has worked well on a community level and has had an important impact in the areas of Carrizal and Villa Nueva. The subproject was partly implemented in the Unit for Social Communication and in UGAM but it was above all on a community level where its impact was evident. The community leaders in Carrizal and Villa Nueva have taken on the objectives of the subproject and there is an interest in its continuity.

3.2.4 SUBPROJECT 4: HOSPITAL WASTE MANAGEMENT

Objective: Achieve safe management of hospital waste that is neither harmful to people nor the environment.

The subproject has assisted the management process of solid waste from hospitals, from the internal management within the hospital itself, to its final disposal at the dump site. The subproject has achieved good results and currently the management of hospital waste has improved considerably. This is obvious at the institutions that were part of the pilot project. The subproject has set the basis to enable the municipality to keep developing the management of hospital waste. The project must still improve its efficiency in each stage of

the process, and it also needs to be extended to other institutions that were not part of the pilot project. Many people have received training and a large amount of printed material has been distributed to the institutions, authorities, and companies involved.

Below are the results of the subproject's implementation are described:

- *An organizational and detailed operative plan for the financing system of hospital waste management.*

The recommendations of the subproject have urged the Health Department to renew the regulation for the "Special Technical Regulation for Management of Waste Generated in Health Centres". Once it is enforced, the regulation will be implemented on a national level in every institution, hospital or health centre. The Swedish and Honduran consultants that worked in this subproject have recommended each hospital on how to improve the management of common waste as well as dangerous waste. The hospitals with the best results are those that have delegated the management of waste to one sole person.

The importance and particularity of each one of the waste management phases has been presented to all pilot hospitals; the Health Department, the company responsible for waste collection, and to the staff working at the dump site.

Aiming to include all the recommendations in an integral plan for the future, the subproject has developed an action plan with very specific recommendations to be undertaken by the relevant institutions, as well as the subproject has developed a clearly designed chronogram.

A substantial result achieved with the implementation of the subproject was to define the financial consequences of the hospital management. The result was presented to the administrations and institutions involved, and an analysis with alternatives and proposals were submitted in detail on behalf of the work team. This empowers the institutions to make informed decisions. A future financing system based on responsibilities of the generating entities has also been proposed. The establishment of facts about financing and costs, as well as the training provided, have generated great interest among the institutions taking part in the activity.

- The institutions involved are informed about the expenses and implications of the different alternatives for the management of solid waste (the information was completely unknown before the inception of the subproject)
- The knowledge relating to expenses and accountancy in hospitals has improved with training and the participation in budget evaluations.
- *Detailed and operative systems for the handling of waste including capacity building of staff and health centres.*

An analysis has been conducted regarding the alternatives for future handling and/or final disposal of dangerous hospital waste, and similarly, a proposal has been made for the conceptual design of a special enclosure for dangerous waste.

This could be built in the new municipal *tren de aseo* which will be founded by Interamerican Development Bank (IDB). As a provisional and immediate solution for the final disposal of dangerous solid waste, a provisional big opening in the ground has been dug-out and it is expected that this experience serves as a precedent and reference to the municipal units and other hospitals. The provisional hole is currently used by three hospitals: San Felipe, AHSS and the Hospital Militar. The total waste of these health centres accounts for approximately 70% of the waste generated in the city's hospitals (this percentage should be compared with the 11% when the subproject was first implemented). A control and weighing mechanism at

the entrance of the municipal dump site has been introduced to measure the amount of dangerous waste from hospitals that are transported separately from the common waste.

However, in the remaining hospitals, clinics and laboratories still use the municipal *tren de aseo* for the transportation of waste. As a consequence, parts of the municipalities' dangerous solid wastes from hospitals continue to be mixed with common waste on collection as well as at the final disposal.

One of the main achievements in implementing the subproject was the increased separation of waste into black and red bags (the black bags containing common waste and the red bags containing dangerous waste and bio-hazardous waste). Another accomplishment was the creation of a special *ad hoc* team of representatives of the Health Department and from the three public hospitals that had engaged the services of waste collection and cleansing companies. The aim of this team is to create the necessary conditions to improve the supervision within each hospital as well as to coordinate inter-institutionally, the supervision of external management. Moreover, some of the pilot hospitals are applying the supervision models of the contracted services recommended by the consultants of the subproject.

Furthermore, it has been ensured that the pilot hospitals are able to contract the services for the waste collection and cleansing and that the contracts are available to the hospitals. In addition, a detailed analysis has been prepared, including recommendations on how the hospitals can add strength to their supervision system. The carrying out of the recommendations has started in hospitals by contracting the services for cleansing and transportation.

The subproject has also brought about a proposal for the improvement of the institutional conditions, including measures to strengthen the existing legal framework, proposals for management schemes and improvement of the internal and inter-institutional organization of the responsible entities for waste management.

With reference to the training of officials and other personnel involved, the following steps have been taken:

- Training in pilot hospitals: has been carried out as an integral part of the activities of the subproject, resulting in definitive results as far as the separation of waste is concerned in hospitals.
- Training of personnel in other hospitals: has been carried out as a completion of other pilot projects. It has been implemented so that the experience can be shared amongst hospitals. Besides from other hospitals, additional health institutions were annexed in order to increase the programme's impact.
- Inter-institutional workshops: the workshops were carried out openly in order to discuss questions and problems of mutual concern. The following institutions took part: Ministry of Health, Municipality of Tegucigalpa, Ministry of the Environment with its different departments, the Honduran Institute for Social Security (IHSS), private hospital associations, hospital directors, etc.
- Training on specific issues: this was carried out in different manners, such as selecting groups responsible for contracting services and the outlining of regulations, and instruction for personnel responsible for hospitals financial accounts. Training on verification and performance of contracts was also provided to supervisors, nurses and guards, meetings with involved parties such as IHSS, private hospitals associations, etc.

- Meetings with involved parties: It is worth noting that high ranking officials such as ministers, mayors and executive secretaries have a busy agenda and do not participate normally in workshops. For this reason, special information and updating meetings have been held on the subprojects.

The work group of the subproject got the opportunity to collaborate with all parties involved in the implementation of the subproject through the many workshops. The participants in these meetings could exchange experiences for the first time.

- *Training of trainers*

An inter-institutional a work team has been created and trained. 200 people have been trained specifically on sorting and handling waste and 800 more have been trained by trainers.

- *Construction of a treatment plant for treating dangerous waste in hospitals that functions and is financed*

IHHS has acquired an autoclave to treat dangerous waste. This equipment was set up in IHSS's Hospital de Especialidades and provides this service to the rest of the IHHS clinics in the periphery of Tegucigalpa

Progress of improvements in waste management varies in general among hospitals. However, each of the pilot hospitals has improved compared to how their situation was at the beginning of the subproject. Some actions for implementation have been proposed in some of the pilot hospitals although it is not known if the implementation is done. These proposals are:

1. That the health centres or hospitals (generating entities) are responsible to select and finance its own waste collection service. The institution has to implement what is stated in *Reglamento Tecnico Especial para el Manejo Seguro de los Desechos que se Generan en los Establecimientos de Salud* to be applied by health institutions at national level. The following has to be stated: (1) generating entities are responsible to obtain and finance a separate transport system for the hospital's dangerous waste and (2), requirements for transportation of waste have to be specified
2. A separate transport system is used for hospital dangerous waste.
3. That the health institution manages its own authorisation and environmental licence. The two points indicated above must be stipulated in the contract

Consultants and other people who have collaborated in the subproject have indicated that a long-term process has started, and this has been noted at various levels, including representatives of the new municipal government.

Direct work with the hospital personnel in their day-to-day routines combined with a global and integral analysis of all aspects included in hospital waste management, establishes the basis for the subproject to be sustainable.

4. CONCLUSIONS

The cooperation project resulting from the twinning between Stockholm and Tegucigalpa lasted five years. This time span has provided valuable experience and the possibility to evaluate the project's impact on the short and medium term. The outcome of the analysis as to how and to what degree the expected results have been achieved, and if the inputs of the four subprojects have been useful to the municipality at institutional level and to the community at grass root level, are shown below:

Twinning between Stockholm and Tegucigalpa and institutional exchange: has worked with the assistance of the consultants

Eventually this worked with the assistance of consultants. The decision to twin both cities and to establish a cooperation project to assist in the reconstruction of Tegucigalpa after Hurricane Mitch was taken following personal contacts between the mayors of the cities. The political decision was not consulted before-hand with officials of the municipality of Stockholm. Whether the professional capacity existed within the institution was not contrasted, i.e. if suitable technical staffs were available during the time the project required. Whether the officials could be taken from their daily responsibilities, or if they commanded a good knowledge of the Spanish language, was not considered either.

Once the cooperation started on a technical level, the relationship between politicians took second place. The implementation of subprojects 2, 3 and 4 had a somewhat slow start due to the factors mentioned above. The impasse created by this situation ended when the Swedish project coordinator decided to involve Swedish private consultants to take over the responsibility of the implementation, while the municipality of Stockholm was in charge of the overall coordination of the cooperation project. This shows that before a cooperation project is proposed, the entity that offers a twinning has to ensure that the technical personnel is available.

The project eventually needed the assistance of Swedish consultants because the municipality of Stockholm could not engage its own staff to implement the tasks. This fact limited an exchange of experiences between both corporations as institutions. The fact that few technical officials within the municipality of Stockholm speak Spanish also added to their difficulty to be fully engaged.

Implementation difficulties at institutional level: obstructs development of activities

There is a change of local government in Tegucigalpa every four years and this causes a problem for the corporation's executive undertakings. As a rule, the employed personnel are changed on all levels after each election causing a vacuum in the municipality's functions. This causes discontinuity in all the units of the municipality since, also as a general rule, the employees who leave the municipality also take with them the experience and know-how accumulated during their time in charge. This situation, regularly experienced, seems to be accepted as normal and is condoned by the highest levels of the municipal administration with the intention of obstructing the function of the new management. This practice badly affects the community it ought to serve.

Transfer of knowledge: may happen if and when officials keep their posts, which occurs rarely.

Transfer of knowledge has worked well through personal contacts and their recommendations, workshops, short courses, conferences, study tours and the joint production of work reports. The achievement of this goal would mean a permanent enrichment of institutions and officials and therefore, of the community. If the transference does not

continue, it will not benefit the citizens. Unfortunately, this is what has happened in the last three municipal government changes.

Communication and transfer of knowledge between The Swedish consultants and their Honduran counterparts has worked well except when there were limitations in understandings of the Spanish language by the Swedish counterpart. However, in general, the communication between the municipalities was held in Spanish and when necessary assisted by an interpreter. English was used at certain occasions by some of the Swedish actors, especially in the early days of the project. When the project activities required a broader number of involved people, direct communication turned into Spanish at all times. This was handled easily by the Swedish consultants working for SWECO and Global Reporting.

Continuity, ownership and sustainability: conditioned to the permanence of officials in their posts.

A clear sign of interest in participating and training has been noted during the implementation of the subprojects, more so when the whole capacity building exercise occurred during the same mandate period. Interest in following the implementation process to achieve project objectives and its ownership by the institutions depends on whether the officials stay in their jobs and if the administration backs this interest. The latest local governments have proved that this is not the case and that agreements were not ratified even when the project period overlapped the new administration. Without political validation, the subprojects should have been designed to be implemented during the same administration.

The four subprojects have provided basically, improved capacity to the Honduran counterparts, to the highest executive level and to key officials within the participating municipal units (UGAM, Solid Waste Management and Social Service) but this capacity building is lost within the unit's internal operations if officials do not remain after the change of government since the know-how and experiences are thus not transferred to the new personnel. It is further not exceptional that new heads of units lack experience to do their jobs.

The project's usefulness on the short and long term: it depends on the degree that institutional changes occur and on officials remaining in their posts

Without changes in the institutional culture and procedures, the long-term benefits cannot be achieved. These changes should be initiated and backed by the heads of the municipal government. New administrations should consider and value the existing knowledge and experiences of employees and secure the continuity of human resources.

Tangible impacts on institutions and on the community: in some components of the project

The impact resulting from the implementation of Subproject 1 was noted during the first part of Miguel Pastor's government when the IDB was willing to disburse part of the loan and in Subprojects 2, 3 and 4 in the second part when consultants were executing them. The loan granted by IDB at the end of 2002 should be used to implement the Strategic Plan included in Subproject 1 but the funds were not used for the planned purpose. This was the reason why the bank suspended the disbursement of the rest of the loan. Until a transparent handling of funds is not followed and the implementation of the Strategic Plan is continued, the rest of the loan will not be granted. Impacts are in general more evident in Subprojects 3 and 4, where the municipality has played a secondary role.

Engagement of Honduran consultants: a valuable resource

IAdS joined the Swedish consultants' team in Subprojects 2 and 4, a fact that helped their implementation tremendously. Thanks to the capacity to organize and coordinate, the professional level and commitment of the local consultants assisted in achieving the project's expected goals. The outcome of the activities has been registered on a considerable number of reports (for Subproject 4) that have been distributed to the parties involved. In addition, the

Honduran consultants are considered a useful sustainable resource, which is not affected by the change of governments.

Sida's strategy for Honduras; poverty reduction, gender equity, environmental protection, support and promotion of democracy, human rights: a partial impact

The twinning between the cities of Stockholm and Tegucigalpa and the cooperation project on the management of solid waste fulfil part of Sida's objectives for Honduras, those regarding environmental protection and human rights. The four subprojects are closely related to the environment. Improvement in the quality of life is sought for citizens through a better management and handling of solid waste. The improvement of living conditions through an environment that is not dangerous or harmful to public health is a human right.

5. LESSONS LEARNED

5.1 THE PROJECT AS A WHOLE

- It is to be ensured before signing a cooperation agreement between two cities, that Sida's strategies are taken into account
- Before cooperation agreements between cities are reached, there must be full assurance that both parties can contribute with the necessary resources to fulfil the agreement.
- All action based on political grounds, is liable to cease when a change of government occurs. New strategies have to be devised to achieve long term results.
- The technical staff of the municipality of Tegucigalpa is not always appointed according to their professional competence, but usually because of their affiliation to a particular group or political party. The contracting process of personnel is neither transparent nor open.
- An obstacle to maintain the professional know-how within the municipality is due to the strong hierarchal system in the society itself. It is quite common for officials to be sacked with no explanation.
- Officers' participation in projects and the attendance on related meetings are subject to the decisions and recommendations of the head of the unit or of the Executive Secretary of the Mayor's Office.
- The Mayor's will is fundamental for the participation of the municipality in the implementation of a project. If the Mayor/Mayoress is not interested, it is very unlikely that the municipality's units would be.
- To get specific and sustainable results in the municipality development objectives, it is necessary to ensure that projects be independent even though there is a change of governments. At present, it is easier to achieve real and sustainable results without the direct participation of the municipality. There is a great interest and substantial human resources in communities such as Carrizal and Villa Nueva but these have no financial resources. Some government sectors are more interested in solid waste management, like for instance, the public health sector. In hospitals and in the Health Department it is possible to find concrete results and the will to participate
- Of the four subprojects, the last two show more specific hands-on results. This is partly due to the fact that the people involved in the subprojects had jobs that did not depend on the outcome of the elections. Communities and hospitals are further more able to plan their own long term development since the plans of the Mayor's Office are limited to a four-year period.
- The first budget of the project showed ignorance of the project's nature and of the necessary activities to implement it. Neither were the working conditions in Tegucigalpa known. For instance, the project coordination's assigned budget was too low and so was the amount earmarked for the visits to Tegucigalpa (however, the budget was adjusted later during the project's implementation period).
- It has been difficult for the personnel of the municipality of Stockholm to cooperate to the extent that was intended at the start of the project. This situation was the result of the high-level decision to twin the cities (taken at a high political level) whereby

public officials had to adjust themselves and contract private consultant companies in order to fulfil the municipality's commitments to achieve the subprojects' objectives.

- Alternative forms of cooperation have to be found in order to create an 'institutional memory' and ensure that the achieved capacity building does not disappear after each municipal election.
- Difficulties in communicating in a foreign language and the insufficient available time for Swedish officials showed that they were not readily prepared for this kind of project.

5.2 THE SUBPROJECTS

Subproject 1: Institutional strengthening and capacity building with regards to solid waste management

- Subproject 1 was strongly supported by the Mayor's Office and UGAM, aware that if the subproject was successfully executed, the other subprojects would follow thereafter, and above all, that more financing would be made available. Also, the technical advisers of this subproject were well skilled.
- Many of the subproject's achievements are due to the Swedish advisers' longer work stay in Tegucigalpa. By being present in meetings and strategic seminars, they could contribute with valuable recommendations.
- The advisers' know-how was fundamental to obtain the IDB's loan to extend the privatisation of the solid waste collection service to the whole city. However, the loan was not utilised for the purpose it was assigned. IDB will not disburse more funds until the previous commitments (with regards to the first loan agreement) are fulfilled by the Mayor's Office.
- A foreign company (in this case, for the collection of solid waste) is in theory less inclined to be corrupted if it remains out of domestic politics.
- The difference in competences and responsibilities between the different units of the municipality was not always easy to clarify. For instance, with regards to the social plan for *pepenadores*, it was not clear which of the units that was really responsible for the plan, UGAM or the Unit for Social Service, as both claimed interest in being the leading unit.
- The residents of the marginal areas do not have the title of property of their dwellings and therefore do not have appropriate mechanisms to demand waste collection service. Accordingly, the residents do not want to pay taxes or tariffs to the municipality for the waste collection service (which, on the other hand, is not reliable). This is an argument used by the Mayor's Office for not providing a regular service or no service at all. To come around this problem, alternative solutions should be sought to allow citizens to pay and *receive* the waste collection service until they register their property and thereafter, to legally own the land and the premises. This is a technically easy exercise but legally complicated since in many cases there are several people or families who claim that they are the rightful owner of the same property.

- It is difficult for foreigners in a short time to understand the intricate relationships of local politics and all the vested interests existing among politicians, businessmen, local organisations and public at large.
- It is very common that municipal and national politics decide where investments will be placed in cities like Tegucigalpa or Stockholm. Investment decisions in Tegucigalpa are often based on personal grounds.

Subproject 2: Regulatory supervision programme for industrial waste

- There were some difficulties to obtain the requested information from the Tegucigalpa authorities. The municipality's management units usually stated that the requested information was not available. For example: DECA (General Directorate for Evaluation and Environmental Control) was unwilling to collaborate and share information on the factories in the city with the working team in charge of the subproject.
- There was a significant change in people collaborating with the subproject's work team. In addition, the implementation of the subproject was often complicated due to the lack of participation in project activities by the personnel who were part of the working team. The alleged reason for the absence was that the municipality's staff had to attend to their daily work.
- The project could have gained by cooperating with other development agencies or private companies. For example, Roche, a Canadian consulting company which undertook similar activities to those of the subproject. Even though Roche and the subproject carried out analyses of industries in Tegucigalpa and their waste disposal no cooperation was established. It was noted that the Swedish consultant tried to establish closer contact with Roche without success.
- The neutrality and working capacity of a foreign cooperating entity appears to be positive in order to establish new contacts or organise workshops where people from different sectors of society take part.
- Coordination with COHEP (Private Companies' Council of Honduras) to hold an environmental conference had a very positive outcome. New contact between the municipality and the industries was established. The conference was held as a result of the Stockholm-Tegucigalpa project.
- UGAM had skilled personnel and was conscious of the importance to undertake regular followings of the monitoring of factories in the municipality. However, there were interruptions in the organisation of the activities and monitoring of industries was carried out at random, without documentation and sufficient following.
- It is taken as being normal that the monitoring of industries lacks regularity and continuity if there is no annual monitoring or a short, medium and long-term strategy. The lack of documentation, a data base and the implementation of the conclusions of the reports hamper the knowledge deriving from the results and affect the rightful purpose of the monitoring.
- A monitoring plan exists but not the mechanisms or the financial resources to carry out the final disposal and treatment of industrial waste in Tegucigalpa. Because of

lack of financial means, the authorities do not regard themselves responsible for the ongoing illegal disposal of waste.

- It is difficult to achieve the follow-up of monitoring without the input from adequate staff. Monitoring undertaken by UGAM could achieve better results if the number of staff engaged in this task could be increased.
- The language barrier that existed between the first Swedish consultant and the technical personnel of the factories was a handicap in the execution of the first part of this subproject.

Subproject 3: Development of municipal information with focus on solid waste and the environment

- It was the very first time people from civic society actually took part in an information project of this nature. The subproject facilitated for citizens in marginal areas to feel engaged in the implementation of the activities. Hundreds of people were involved.
- The achievements resulting from popular mobilisation involving the civil society in a project of this nature are of outmost importance. However, development programmes and projects always depend upon the will and cooperation of the municipality.
- One of the reasons leading to the success of the subproject was due to it not being political, and instead based on Carrizal and Villa Nueva's community interests. Because of the non-political and non-electoral nature of it, a greater number of people trusted the objectives of the subproject.
- The participation of the municipality resulted to be complicated. There were problems caused by doubts regarding which unit was responsible for the proposed activities. This in spite of a good number of officials participating in the workshops. In addition, there was little interest in the subproject by UGAM, since it is a technical unit and not so much a social one.
- It would have been useful that UGAM shared the responsibility for the implementation of the subproject with other relevant units of the municipality.
- Residents of Villa Nueva and Carrizal are greatly interested and willing to cooperate in upgrading their environment and in the collection of solid waste according to interviews and meetings with them. Several residents have suggested that the subproject should be followed by a second phase.
- Environmental education in primary schools is an important mean for capacity building in children and youth with regard to solid waste management.
- Confidence in the municipality is very low in Carrizal and Villa Nueva regarding the provision of community services.
- Working with interrelated methodologies contributed to the success of the implementation of the subproject. The working team worked together with the beneficiaries of the subproject in order to gain from their ideas and points of view. To include competitions and contests helped to bring forward "the struggling temperament of the Latin people". This was considered a good way to bring in the communities into the subproject's activities.
- Contacts between the Mayor's Office, the private sector and other organisations should be increased in order to create a foundation similar in nature to "keep

Sweden clean". To gain the private sector interest to participate in such a project, it is necessary to explain which advantages the project would bring to the parties.

Subproject 4: Management of hospital waste

- The sustainability of the subproject will increase even more if the people responsible for decision-making are involved from the beginning and participate actively in the formulation of the subproject's objectives.
- It was proved that the combination of practical activities, measures based on thorough analysis, taking into account prevention strategies and institutional reforms; is an excellent work methodology. The implementation of the subproject also shows how these combinations are interrelated and that the practical activities define the strategic directives needed. At the same time, the practical measures and activities depend on the strategic guidelines to be sustainable.
- The management of hospital waste is difficult. Many aspects have to be evaluated separately and in detail, for instance, the great number of people and institutions involved in different ways of decision-making. The implementation of the subproject has proved the presumption stated in 2002: that there should be a document/location where all the aspects relevant to the implementation should be kept and stored to ensure the functional efficiency of the subproject.
- Many changes and adjustments had to be done to define the role and the responsibility of the people involved in the decision-making process and in advising the municipality about necessary investments.
- A combination of financing means (grants and loans) to increase the implementation capacity and supervision of the subproject could have achieved even more of the technical recommendations.

According to the consultants who worked with the subproject there are some general institutional problems that in practice affect the implementation of the subproject, according to the advisers. Problems such as acquisition procedures, general budget, permanence of staff, general lack of coordination between the institutions, etc.

6. RECOMMENDATIONS

Conditions to efficiently implement a twinning project

The project cooperation started as a reaction to the acute need in the environmental sector and in the solid waste management in areas severely pounded by Hurricane Mitch in Tegucigalpa. The political decision of twinning the capitals of Honduras and Sweden was taken with no previous study on what taking such decision implied.

No assessment was made of the commitment to the project's implementation and its implication on the side of the technical staff of the municipality of Stockholm, nor if the necessary know-how was available.

Overall Recommendations:

In order to undertake a twinning project and execute it efficiently, the municipality has to self-examine and ensure before committing itself that:

- information about the country of cooperation is readily available, or that the needed knowledge is procured, and that there is an understanding on how the cooperating country works.
- the municipality's determination is evident for this type of cooperation and that the interest in it should be based upon a mutual exchange between both municipalities in order to ensure a useful and sustainable cooperation on a long-term basis.
- there must be the specific know-how required by the counterpart
- the cooperation project is assessed in order to provide the technical assistance that is missing within the work programme
- there is no language barrier for the implementation of the project
- the finances of the project are properly designed, defining the time for implementation in order to reach the expected results.
- that the staff involved in the cooperation may stay in the country that is being aided for longer periods of time (on occasions more than two weeks), if needed.
- the implementation starts as soon as possible with practical and temporary activities while preparing proposals for the long-term execution of the project.
- If the main purpose of the project is to obtain long-term impacts, Sida ought to ensure that the terms of the agreement include a clause guaranteeing the continuity of the project, even in the event of government changes, establishing measures and available resources to carry out its continuity.

Recommendations for Subproject 1

The municipality of Stockholm and SWECO have provided the means for a consultancy at high level to their counterpart in Tegucigalpa, who partly has achieved the expected results stated in the terms of reference. The subproject has strengthened certain practices at the Environmental Unit of the municipality during its three years of implementation. Nevertheless, bearing in mind that the capacity building of the staff of the institution was carried out particularly between 2001 and 2003, the training and the gained know-how of the

staff do not remain in the institution and the present staff of the municipality has not been trained. Discontinuity in the employment of municipal personnel further impedes a follow-up on those activities started unless a second phase is undertaken.

Having in mind that Sida's objective is to improve the situation for the most underprivileged, there are two specific aspects in this subproject that need special attention: that the solid waste collection service has to be considerably improved in the marginal areas and that the ownership of land and dwellings is progressing in these areas since residents do not own the title of their properties at present. Therefore, they are not liable to pay taxes and tariffs for the collection of solid waste.

It is recommended that Sida considers the possibility to support the new municipal administration in Tegucigalpa by assisting in organising a workshop on the lessons learned from the development of the Strategic Plan. In addition, assistance should be provided to improve the solid waste collection in the two development areas included in the subproject related to social housing that presently are implemented through FUNDEVI (Foundation for Development of Urban and Rural Social Housing). This foundation deals with activities that assist in the process of legalizing land ownership titles and could become a good means through which the provision of solid waste collection can move faster.

Recommendations for Subproject 2

The objectives of this subproject stipulated that the knowledge on industrial waste and the supervision capacity was to increase and be strengthened within the Environmental Unit of the municipality. Even though the training of supervisors and capacity building of the staff regarding cleaner production was successful, the subproject could not ensure that a long-term plan for monitoring the production of factories could be implemented. Staffs were trained as in Subproject 1, but these persons are no longer working for the municipality. As long as a monitoring plan is not applicable, neither exists a data base where to store information from the factories, no further funds should be allocated for the training of personnel. The same principle relevant to Subproject 1 is also applicable in this case: the staffs presently working at the Environmental Unit (with very few exceptions) is not trained to carry out their functions.

The importance of the legal framework has to be taken into consideration to implement Subproject 2. Moreover, the participation of trade unions must be also taken into account, to work intensely with authorities outside the municipal sphere and to ensure the active participation of the private sector. It is recommended, to follow the development of this subproject that Sida considers the possibility to provide assistance to the municipality to develop a data base to facilitate for the supervision and monitoring of industrial waste. A data base would be a sustainable asset since its function is long-term and can be useful to the present and future municipal administrations.

Recommendations for Subproject 3

In order to consolidate and expand the training already carried out in Carrizal and Villa Nueva, a continuation of the subproject should be considered, involving the communities that were involved engaged in the implementation. A continuation of the cooperation between the Mayor's Office and the civil society would be very important. The municipality could assist in expanding the gained experiences and working methods to other development areas of the city.

This is one of the first projects financed by Sida dealing with communication as a means for development and the experiences gained are remarkable. The applied concept can easily be replicated in other communities and cities aiming to improve the living conditions of the poorest sector of the population. The possibilities to continue this subproject to achieve a long-term impact on the rest of the development areas are significant if the support and provision of financing means to the municipality can be solved.

To continue the subproject or develop a similar one, it should be ensured that the Mayor's Office regards it as its own project, and the implemented methods are adopted by the corporation, providing training to the personnel involved and financing the activities. The municipality can also involve NGOs and other community organisations.

It is recommended that Sida, in cooperation with the Mayor's Office collaborate to develop a second phase of this subproject including:

- Assistance to primary schools in marginal areas regarding education on the environment
- A stronger cooperation between the Mayor's Office, the marginal areas and the private sector and/or provision of training to NGOs/ community leaders as to how to create and manage small companies for the collection of solid waste.
- The cooperation between the municipality, the communities and the private sector and/or training NGOs/community leaders on how to work out information campaigns similar to those carried out in Carrizal and Villa Nueva.
- Training people to work as 'trainer of trainers', so that the methodology used in Carrizal and Villa Nueva is better known in other marginal areas of the city.
- Taking initiatives to establish a foundation similar to 'keep Sweden clean', to be jointly managed by the municipality, the private sector and the civic society. It is important that the foundation is not related to domestic politics so it can be sustainable on a long-term basis and avoid being affected by municipal elections.

Recommendations for subproject 4

It is recommended that the subproject is continued in order to consolidate and extend the lessons learnt in the pilot hospitals. This would also help to improve the hospital waste management within the health sector in Honduras when the new regulations are in force. It is recommended that:

- the coordinators' network organised by the responsible officials for waste management within each health centre is strengthened
- a training and capacity building programmes is better organized. The training could be carried out through television courses or CD Rom, and in case the training material already exists as such, it would still be important to strengthen the organisational aspects of the training component to ensure that it includes all aspects of waste management within the health sector and that it reaches all employees.
- the transportation of dangerous waste from the hospital is monitored along the whole handling process to secure the control of disposals.
- the municipality of Tegucigalpa sees that there is an increase in cooperation on collection of waste between the private sector, health centres and hospitals.
- At the beginning of the implementation of the subproject, the possibility to execute it is studied in parallel and in close cooperation with a programme on a wider institutional reform so that its impact is stronger and the results more sustainable.

General recommendations on Sida's responsibilities

Sida, being the agency that finances cooperation projects and programmes, ought to play a more active role and a more continued monitoring on the implementation of cooperation projects. A continuous control allows for the adaptation of the project to upcoming circumstances.

Sida should study the possibility to coordinate projects of similar contents and/or nature carried out by other agencies or organisations, with its own project agenda.

In any project where the local authority is involved Sida should ensure, through agreements or relevant contracts, that the result of the projects (printed in various ways, digitalised, etc) is kept in the municipality's archives and is readily available to its officials; Sida should also facilitate for that the achieved institutional capacity is sustainable in terms of being permanent.

Agreements, private foundations and a wider cooperation between the civil society, the municipality and the private sector are good examples that can be developed independently from changes of government.

It is further recommended that Sida should organise a workshop to provide the new municipal government with the possibility to cooperate in following the recommendations that have evolved from the four subprojects.



ANNEXES

21 February, 2006

INEC/Urban
Kurt GranbergTel: +46 (0)8 698 5189
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E-mail: kurt.granberg@sida.se**TERMS OF REFERENCE**

Rev. 1 06-02-28

Rev. 2 06-03-07 (addendum)

PROJECT EVALUATION

The cities of Tegucigalpa and Stockholm: Co-operation on Waste Management and Environment

1. Background

In 1999 The Swedish International Development Co-operation Agency (Sida) organized a Post Mitch seminary in Stockholm. Honduras was identified as one of the most affected countries and Sida decided to provide the reconstruction process in Honduras with a substantial financial support. A twinning arrangement was proposed for the cities of Tegucigalpa and Stockholm. Sida has supported this initiative of mutual co-operation between the two cities. The co-operation between the two cities focused on the area of waste management and environment. At the same time the city of Tegucigalpa had already embarked on an ambitious programme of privatising part of the collection and transportation of the solid waste in the city. This initiative was supported by a loan from the Inter American Development Bank (IDB). It was an expected requirement that these two initiatives should be co-ordinated. In June 2000 the two cities with the assistance of a Swedish Consultant (SWECO) produced a project proposal. The Project Proposal included the implementation of five sub-projects. Four sub-projects were implemented with the support of the city of Stockholm and Swedish private consultants. The fifth sub-project, Urban planning with a focus on waste collection, was excluded from the programme. The four implemented sub-projects have been finalized and a final report for sub-project one and draft final reports for sub-projects two, three and four have been produced.

2. Objective

Sida has decided to evaluate this programme with the aim of compiling the lessons learnt and to assess the impact of the programme on the identified target groups. Given the locally-focused nature of the programme, it is in Sida's interest that the experiences should be documented and shared with other municipalities, relevant government departments and development institutions, in Honduras and elsewhere

3. Scope of Work

The main tasks for the assignment are:

- to review the implementation of the four sub-projects in relation to the agreed objectives and the expected results:
 1. as specified in the original project documents
 2. as amended or adjusted in the process, and the reasons for those changes
- to assess the level of sustainability achieved by the different sub-projects and the impact on the target group.
- to assess the level of achievement of the objectives and concrete results of the following Sub-Projects and the expected results specified on the overall project document:

3.1 SUB PROJECT ONE:

Institutional Capacity Building and support in waste management.

3.1.1 Objective

Build the necessary institutional capacity in the municipality of Tegucigalpa to be able to co-ordinate, plan and engage private companies for waste collection.

3.1.2 Expected results

- Develop a privatization programme of solid waste services.
- Develop a system for monitoring and evaluation the solid waste management activities implemented by the Tegucigalpa municipality.
- Support and capacitate local officials on designing a new tax and tariff system.
- Develop an operative Solid Waste Management Plan
- Develop a Municipal policy that coordinates and distributes responsibilities between the different municipal units concerning the implementation of the new Solid Waste Management Plan.
- Develop a strategy to provide Solid waste services to the poor areas. This strategy will be part of the Solid Waste Management Plan.
- Develop a city cleaning and collection system, which will be the base for the implementation of the new Solid waste Management Plan

3.2 SUB PROJECT TWO

“Monitoring Campaign of industrial waste”

3.2.1 Objective

Increase knowledge about Industrial waste within Tegucigalpa municipality environmental unit.

Increase the Municipal Environmental Unit supervision capacity.

3.2.2 Expected Results

- Develop a supervision programme and providing the preparatory capacity building.
- The supervision and evaluation of 30 companies.

- Develop an action plan for the supervision and an action plan for the handling of industrial waste. This plan will be developed, approved and financed by the municipality.
- Capacity building done.

3.3 SUB PROJECT THREE

“Development of a municipal strategy for information with focus on environment and waste management”

3.3.1 Objective

To develop a long term Municipal information plan, increasing the role of citizen information in a democratic society.

To increase the municipal communities' knowledge and commitment on issues related to environment and solid waste.

3.3.2 Expected Results

- Implemented Capacity building for a long term strengthening and structured municipal public participation strategy.
- The municipality council will be informed about the development plan and a public information strategy.
- Develop and implement an environment information strategy.
- A broad public education programme implemented.
- Information campaign about solid waste completed.

3.4 SUB PROJECT FOUR

“Management of hospital waste”

3.4.1 Objective

An environmental and health friendly handling and disposal of hospital waste in Tegucigalpa.

3.4.2 Expected Results

- Development and implementation of an organization plan and a financing system plan for hospital waste disposal.
- Development and implementation of a waste handling system, including a permanent education of clinics and hospitals employees have been done.
- Training of trainers completed.
- Treatment plant for hospital waste built, functioning and financed.

4. Method and timing

The consultant shall commence the assignment by reviewing the relevant written information in Sweden.

The evaluation shall involve local officials aiming to achieve a higher level of ownership and aiming to the evaluation document should become a tool which will add to the programme sustainability and for its future improvement.

The consultant shall work in close cooperation with relevant municipal officials for the evaluation of each one of the four programme components (sub-projects).

An initial workshop will be organised with relevant officials and other parties involved in the implementation of the programme.

The consultant team will include the participation of a junior consultant, who will render assistance to the team leader/senior consultant for part of the relevant information compilation work.

The evaluation shall also include analysis of how the target groups have been affected by the implementation of the programme.

As an optional the Consultant may propose a workshop in Tegucigalpa, at the end of the assignment, with a view to inform about the evaluation findings and discuss relevant issues, with all the parties involved in waste management in Tegucigalpa.

5. PERSONNEL

The assignment requires the services of a senior consultant with experience in this type of work. The senior consultant should have long experience working with development co-operation and working experience from Latin America.

A junior consultant will be required to support the collection of information. The two consultants will have Spanish, English and Swedish as working Languages.

6. Timing

The senior consultant shall provide a total of seven work weeks, the junior consultant three. This time shall be divided as follows:

- The senior consultant will work two weeks in Sweden doing the preparatory work and interviewing the Swedish role players.
- Three weeks of field work. During the first week a workshop will be implemented.
- Two weeks in Sweden for the writing of the draft evaluation document.
- The Junior Consultant will work three weeks in Tegucigalpa and one week in Sweden.

7. Reporting

A Draft Final report will be submitted to Sida two weeks after completing the field work.

A final report will be submitted to Sida after receiving the relevant inputs from Sida and the Municipality of Tegucigalpa. Sida and the Municipality are expected to provide their feedback within one month maximum of the submission to them of the Draft Final Report.

The report will be issued in both the English and the Spanish languages.

The following is to replace the text on the draft ToR*)

3.3 SUB PROJECT THREE

- **MUNICIPAL INFORMATION FOCUSING ON SOLID WASTE AND ENVIRONMENT**

3.3.1 Objective

- On a long-term basis strengthen the information work of the municipality of Tegucigalpa in its communication with the citizens; furthermore increase the participation and knowledge of the citizens, in the environmental and solid waste sector.

3.3.2 Expected Results

- An increase of knowledge of strategic communication on a long-term basis within the departments, individuals and organizations involved in this project
- A change attitudes and behavior related to solid waste and litter with focus on two chosen areas in Tegucigalpa
- An exchange experiences and knowledge on how to conduct a strategic information campaign.
- Ensure that the experiences of the project are incorporated in the information work of the municipality of Tegucigalpa, thus strengthening the municipality on a long-term basis.
- Strengthen the contacts and exchange between the municipality, the private sector and civil society.
- Stimulate the establishment of a foundation similar to the Swedish foundation "Keep Sweden Clean"

*) Input from Global Reporting. This page is to be regarded as an addendum to the Terms of Reference, see also under 3 Scope of Work - 2 (underlined here below) in the Terms of Reference.

3. Scope of Work

The main tasks for the assignment are:

- to review the implementation of the four sub-projects in relation to the agreed objectives and the expected results:
 3. as specified in the original project documents
 4. as amended or adjusted in the process, and the reasons for those changes

Metodología.

En la evaluación del programa de cooperación Estocolmo-Tegucigalpa, se han cotejado los objetivos con los resultados del proyecto para- basados en las experiencias adquiridas- llegar a las conclusiones y recomendaciones que derivan del análisis. Las actividades se han realizado en tres fases: una inicial en Estocolmo, seguida por un viaje a Tegucigalpa y una final, nuevamente en Estocolmo. En las tres fases se llevaron a cabo el estudio de informes y documentos relacionados con los inicios y la implementación del proyecto, entrevistas a personas involucradas en ellos, visitas a lugares que han sido objeto del proyecto en Tegucigalpa y un taller evaluativo.

1. Estocolmo

Estudio de informes y entrevistas previas al viaje a Tegucigalpa.

- 1.1 Se estudiaron las propuestas e informes iniciales del proyecto y los informes finales de cada sub-proyecto, entre otros:
- El Pre-estudio del proyecto, febrero de 2000
 - La Propuesta del proyecto, julio de 2000
 - Project Outline, Sub-projects 1B and 2, City of Stockholm, mayo del 2001
 - Utveckling av kommunal information med inriktning på avfall och miljö. Delprojekt 3. septiembre de 2003
 - Hantering av sjukhusavfall inom storstadsområdet i Distrito Central. Delprojekt 4. septiembre de 2003
 - Propuesta de proyecto para el manejo integrado de los residuos peligrosos hospitalarios en el municipio del Distrito Central, UGAM, Agosto de 2002
 - Fortalecimiento y asesoría institucional en el manejo de desechos sólidos- Informe Técnico Final. Stockholms Stad y SWECO. Diciembre de 2003.
 - Final Report for Sub-project 2 in the Stockholm-Tegucigalpa Co-operation, "Industrial Waste Regulatory Supervision Programme". September 2001-December 2003. Ciudad de Estocolmo y Ugam. Katrin Ottosson, Technical Advisor, 2004-03-26.
 - Consejo y entrenamiento para producción más limpia y monitoreo de desechos industriales en Tegucigalpa, Honduras. SWECO, Aquakonsult, IadS. Febrero 2005.
 - Completion Report Stockholm Tegucigalpa (draft). Stockholms Stad, UGAM, Global Reporting. March 2006.
 - Final report Sub-project 4 in the Stockholm-Tegucigalpa Co-operation, "Hospital waste management", February 2004 to October 2005.
 - Final Report Sub-project 1 in Stockholm Tegucigalpa Cooperation: Institutional Capacity Building and Support in Waste Management, June 2001 to June 2003. Stockholms Stad. 25th September 2003.
 - Joint Final report, in the Stockholm-Tegucigalpa Co-operation, June 2001 to December 2005. Stockholms Stad, UGAM. 23rd October 2005
 - Informe de Resultados de Estudios Pilotos, SWECO, IadS. Septiembre de 2005.
 - Memorandum. Plan de Acción para el Manejo de los desechos Hospitalarios en la Ciudad de Tegucigalpa D.C. Taller Final. IadS. 7 de octubre de 2005.
 - Minutes of the Final Annual Meeting, Stockholm-Tegucigalpa Project. Stockholms stad, UGAM. 24 October, 2005
- 1.2 Entrevista con Johan Torberger, Stockholms stad renhållningsförvaltning, 23 de marzo 2006.
Entrevista en Global Reporting: Kina Robberts, David Isaksson, Lars Tallert, 24 de marzo 2006
Entrevista con Katrin Ottosson, Naturvårdsverket, 24 de marzo 2006

2. Tegucigalpa

Entrevistas y reuniones

- 2.1
- Carlos Rivas, Oficial de Programas, Asdi. 27 de marzo 2006
 - Ing. Marcela García, IadS y Rosa Amalia Canales, 27 de marzo 2006.
 - Ing Jonathan Láinez, jefe anterior de UGAM, 28 de marzo 2006
 - Ina Eriksson, Asdi, 28 de marzo 2006
 - Ing. Alfredo Morales, Metroplan. 29 de marzo 2006.
 - Ing. Carmen Elena Padilla, Gerencia Ambiental, 29 de marzo de 2006
 - Franklin Amaya, Gerencia Ambiental, 29 de marzo de 2006
 - Rafael Cano, jefe de la Unidad de Desechos Sólidos, Ing. Tito Castillo, Ing Virgilio ..., 29 de marzo de 2006
 - Reunión en el Hospital San Felipe: Ing. Marcela García, Ing. Carol Perdomo, Ing. Oscar Berganza, Joaquín Arias Fuentes, Ing. Oscar Herrera, Dra. Maritza Gómez 30 de marzo 2006
 - Reunión en el Inst. Hond, de Seguridad Social: Dra. Marianela Landau, Harold Rodríguez, Rosa Amalia Pineda, Ing. Marcela García, Ing. Carol Perdomo
 - Thyrza Ardón, 30 de marzo de 2006
 - Ing. Martín Quan, 31 de marzo 2006
 - Wendy Aguilar, 31 de marzo 2006
 - Ing. Alfredo Di Palma, 1 de abril 2006
 - Eduardo Sánchez, 1 de abril de 2006
 - Reunión en Carrizal: Simón Rojas, Mivia Yolanda Ruiz, Alba Lidia Montes, Johny Velázquez Johana Bonilla, Jenny Bonilla, Sonia Pantoja, Antonia Herrera, María Concepción González, Eduardo Sánchez, 3 de abril 2006
 - Reunión en Villa Nueva: Isabel Rico, Eduardo Sánchez, Teresa de Jesús Gutiérrez, Auriste Mejías, Cándida Rosa Rodríguez, Elvis Yovani Rico, Jessica Pereira, 3 de abril 2006
 - Waleska Pastor y Jonathan Láinez, 4 de abril 2006
 - Ing. Carol Elvir y arq, Sergio Blanco Ania, AECI, 6 de abril 2006
 - David Carías, Banco Interamericano de Desarrollo (BID), 6 de abril 2006
 - Ina Eriksson y Carlos Rivas, Asdi, 7 de abril 2006

Visitas

- 2.2
- Hospital San Felipe, 30 de marzo 2006
 - Instituto Hondureño de Seguridad Social: Hospital de Especialidades, 30 de marzo 2006
 - Colonia Carrizal, 3 de abril 2006
 - Colonia Villa Nueva, 3 de abril 2006
 - Botadero municipal, 6 de abril 2006

Taller evaluativo

- 2.3 5 de abril 2006. Ver Apéndices 7.7 y 7.8

3. Estocolmo

Entrevistas posteriores al viaje a Tegucigalpa

- Kina Robberts y David Isaksson, Global Reporting, 20 de abril 2006
- Magnus Montelius, SWECO, 20 de abril de 2006



Joint Final report, in the Stockholm-Tegucigalpa Co-operation, June 2001 to December 2005

Executive summary

According to underlying legal documents we hereby present this "Final Report" covering the time from June 2001 to December 2005.

There has been three "Annual Review Meetings" held during the project period. An "Annual report" was presented at each meeting. For project 1 there has also been held a "Final Review Meeting" including a "Final report".

"The first "Annual report" was presented on a meeting on the 12th of March 2003 and covered the project period between June 2001 and December 2002. The report covered only Sub-project 1 and Sub-project 2. In October 2003 a supplementary contract for those two Sub-projects was signed between The City of Stockholm and The City of Tegucigalpa. At the same time, October 2003, a new contract between The City of Stockholm and the City of Tegucigalpa was signed. This contract was signed for carrying out Sub-projects 3, 4 and 5. As a complementary to these two contracts Sida has signed two new "Undertaking to pay invoices" covering the financial part of the co-operation.

The second "Annual report" was presented on a meeting on the 4th of June 2004 and covered the time from January 2003 to May 2004.

The third "Annual Report" was presented on a meeting on the 24th of February 2005 and covered mainly time from June 2004 to December 2004.

The financial reports cover the entire project period from June 2001 until September 2005 and are found in Annex 5 and 6.

Over the time each "Annual report" has been presented and fully adopted by both The Stockholm City Waste Management Committee and The Stockholm City Executive Board.

Sub-project 1, "Institutional capacity building and support in Waste Management", was officially finalised in September 2003. A final review meeting was held in Tegucigalpa on the 19th of September 2003 and the final report was published in December 2003. The final report is found in Annex 1 and the financial outcome is found in Annex 5.

Sub-project 2, "Industrial Waste Regulatory Supervision Programme", started formally in June 2001 but did not come to practical action until September 2001. The project was delayed in the finishing phase due to two major problems. First delay was depending on the fact that the project

leader resigned from the project by the end of December 2003. Second delay was depending on problems with procurement of consultants necessary to perform the planned final part of the project. In order to finalise the project a contract was signed with the Swedish consultancy company SWECO International in the end of November 2004.

During January and February, 2005, the remaining parts have been carried out. The final report was presented on the third Annual Meeting on the 4th of June 2004 which makes this project finalised. The final report you will find in Annex 2 and financial outcome is found in Annex 5.

Sub-project 3, "Environmental information" started in September 2003. The sub-project was initially manned with personnel from the City of Stockholm but they resigned from the sub-project in April 2004. To solve the situation a contract with the Swedish consultancy company "Global reporting Sweden AB" was signed to carry out the sub-project. They are, of course, supported by specialists from the City of Stockholm. The final report you will find in Annex 3 and the financial outcome is found in Annex 6.

Sub-project 4, "Management of hospital waste" started in September 2003 with a sub-project leader from the City of Stockholm. By the end of December 2003 the sub-project leader resigned from the sub-project. In order to save the sub-project, and carry it out as planned, it was necessary to engage a Swedish consultancy company. In the middle of February 2004 a contract with the company "Sweco International AB" was signed to carry out the sub-project. A Swedish expert from Karolinska University Hospital has all the time been connected to the sub-project. The final report you will find in Annex 4 and the financial outcome is found in Annex 6.

Sub-project 5, "Exchange of experience in Urban Planning" has not been carried out according to the original project outlines. An unpredicted lack of capacity from the City of Stockholm and an uncertainty from the City of Tegucigalpa whether the sub-project was needed or not led to the decision on last "Annual meeting" to drop the sub-project in its original form.

At the "Annual Review Meeting" in February 2005 the City of Tegucigalpa was asked to come up with alternative proposal for agreement by the City of Stockholm and later official adoption by Sida.

Financial summary. Looking to the financial outcome you can see that Sub-project 1 is finalised within the budget and Sub-project 2 will also be finalised within the budget. Those two sub-projects may also generate a small amount of surplus. An ongoing discussion with Sida is to handle the non-existing financial contribution from The City of Tegucigalpa, marked in grey in the attached financial summary.

The budget overdraw related to sub-project 3 depends on extra costs which appeared when the sub-project had to be reorganised because the experts from the City of Stockholm resigned from the sub-project and other experts had to be engaged.

Regarding sub-project 4 there is it no reason to expect an overdraw of the sub-project budget regarding known facts so far. A reliable prognosis is presented in the table below. Details in the financial summary can be found in Annex 6.

The following table gives you a brief summary of cost related to the budget until the 3rd quarter and estimated expenses for the 4th quarter. The figures cover the entire sub-project period June 2001 until December 2005. The budget overdraw related to C-ordination 3,4,5 is related both to the fact that the need for time was underestimated in the budget and that has appeared costs which was not in the budget at all. The underestimated cost for co-ordination of the whole project

has later on been authorised by Sida in Stockholm to be covered within the total project budget. Other costs not within the budget were an executive visit in Stockholm from Dra. Waleska Pastor and Ing. Jonathan Lainez, our main counterparts from the City of Tegucigalpa. The visit took place in the end of May/beginning of June 2005.

The same situation also appeared in sub-project 4. But with a wider budget frame it has been possible to handle the situation within the budget.

The absence of contribution, named above, from the City of Tegucigalpa has also affected the outcome in a negative direction.

Looking at the grand total figure it is estimated that the entire project can be finalised within the frame of available funding.

Sub-project	Budget	Outcome	Budget ./ Outcome	Remains until 31/12/05	Expected total outcome
1	3 832 500	3 760 579	71 921	0	3 760 579
2	1 835 500	1 784 615	50 885	0	1 784 615
Co-ord. 3,4 5,	2 000 000	2 087 832	- 87 832	220 000	2 307 832
3	3 800 000	3 914 915	-114 915	60 000	3 974 915
4	6 103 750	3 794 847	2 308 903	1 755 000	5 549 847
5	0	0	0	0	0
Total	17 571 750	15 342 788	2 228 962	2 035 000	17 377 788

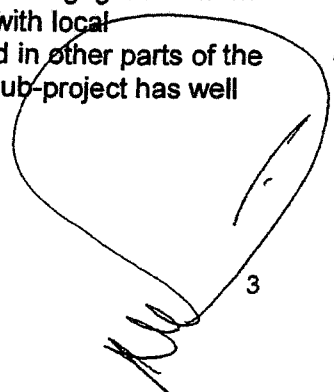
Auditors report. A contractual audit of the sub-project has not been carried out to this Final Meeting. The latest report was presented at the "Annual Meeting" February 2005. In order to save some money when the entire project now is ending up I have chosen to make a final auditors report when all the financial transactions has occurred after the 4th quarter 2005.

Conclusions

Sub-project 1 is finalised in a successful way and its final report has been reviewed and approved by the two Cities and Sida. In my opinion I am convinced the final report fulfils the objectives from the original terms of reference and can be used as a valuable tool for further actions to develop the waste management in the City of Tegucigalpa.

Sub-project 2 is finalised, with an unpredicted delay, by the end of February 2005 and its final report has been reviewed and approved by the two Cities and Sida. In my opinion the sub-project reached its goals and will be useful as a model for further development of the field of monitoring the industrial waste.

Sub-project 3 had a delayed start as pointed in earlier reports but has since then developed in a very satisfactory way. All the planned activities have been carried out and the engagement from the different working groups has been very good. The idea of co-operation with local organisations as well as NGO:s to create a model of acting that can be used in other parts of the City is interesting and could easily be used in the future. In my opinion the sub-project has well reached its goals.



Sub-project 4 had also a delayed start but with dedicated working groups and skilled experts from Sweden the results must be considered very good. The strategy for the project has been, as in sub-projects 2 and 3, to create a model how to handle the hospital waste in a more environmentally friendly way. As the sub-project co-operated with a number of different hospital this model can easily be used for other hospitals up grade their waste management in the right direction. In my opinion the sub-project has well reached its goals.


Sub-project 5 was suggested to be shut down in its original form at the "Annual Review Meeting" in February 2005 because the fact that the City of Stockholm was not able to come up with the necessary experts. Therefore it was decided that the City of Tegucigalpa should work out an alternative proposal for the sub-project and with approval from both Cities present it to Sida for their approval of using the original funds. The proposal was presented so late that there were no time left to carry out the proposal. In my opinion the best thing to do, under present circumstances, is to officially close down the project and conclude that the funding could not be used as planned.

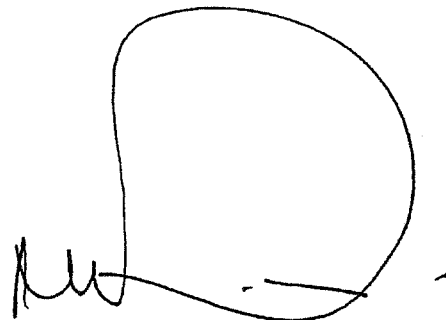
From a general point of view the sub-projects are carried out as planned and can very well be used as models for the future development in the different areas of managing the environment.

Finally we must ascertain that the entire project is worth more attention and engagement from both the City of Stockholm and the City of Tegucigalpa when you look back and see the obvious results, which has been obtained.

I refer to annexes 1-6 for details.

Tegucigalpa 23rd of October 2005


Johan Torberger
Project Director
City of Stockholm


Waleska Pastor
Gerente General
Ciudad de Tegucigalpa

List of annexes:

Annex 1: Final report for Sub-project 1 in The Stockholm Tegucigalpa Co-operation, "Institutional support and capacity building and support in Waste management", June 2001 – June 2003

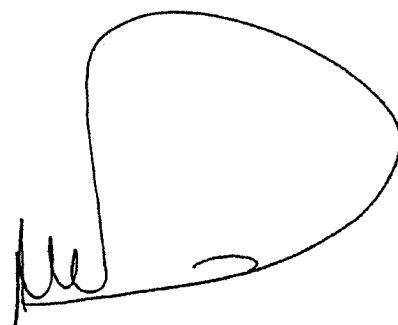
Annex 2: Final report for Sub-project 2 in The Stockholm Tegucigalpa Co-operation, "Industrial Waste Regulatory Supervision Programme", September 2001 – February 2005

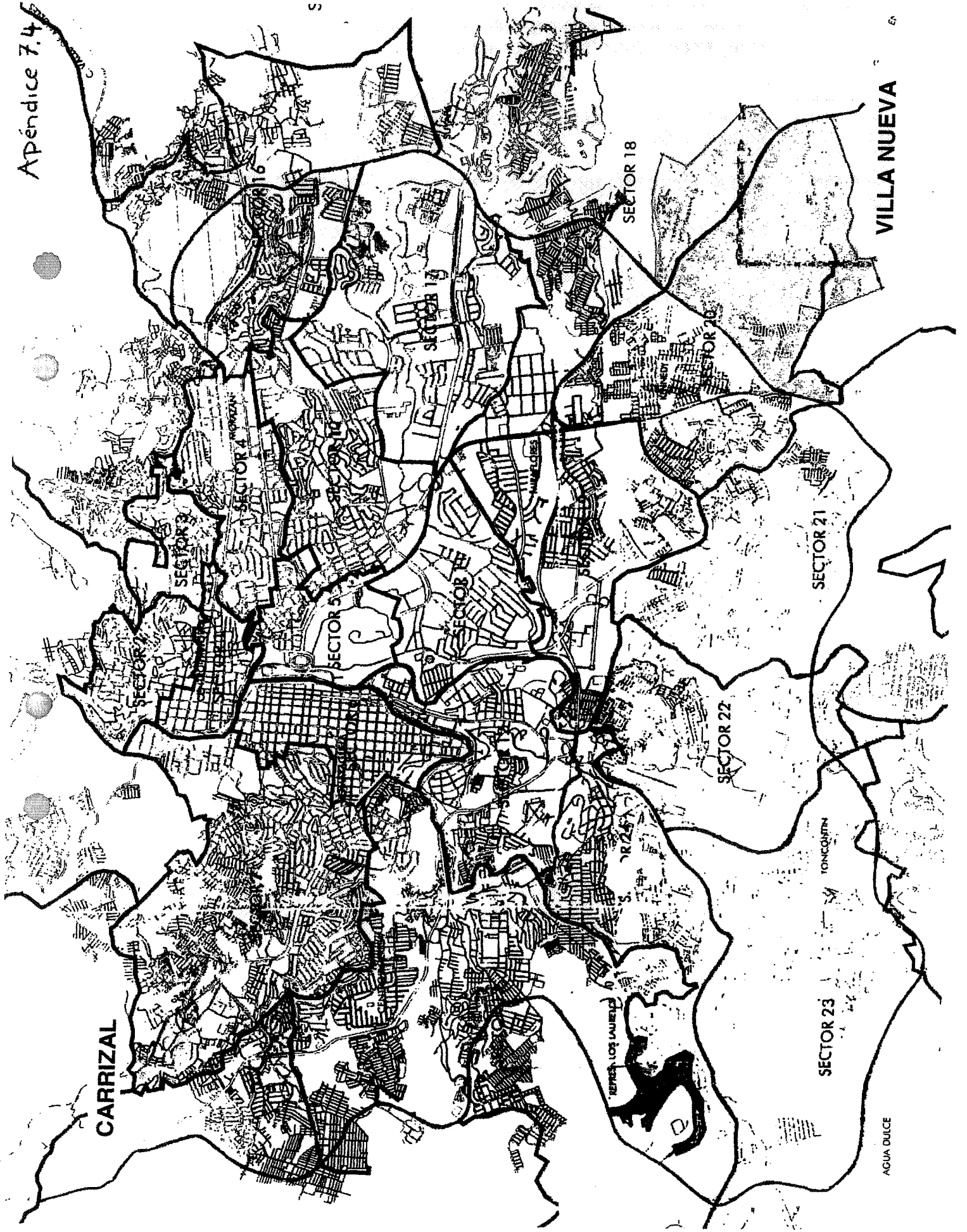
Annex 3: Annual report Sub-project 3, May 2004 – December 2004

Annex 4: Annual report Sub-project 4, June 2004 – December 2004

Annex 5: Financial summary, June 2001 – December 2004, Sub-project 1 and 2

Annex 6: Financial summary, September 2003 – September 2005, Sub-project 3, 4 and 5 and co-ordination

A handwritten signature in black ink, consisting of a large, stylized loop on the right side and a series of smaller, connected loops on the left side.



CARRIZAL

VILLA NUEVA

AGUA DULCE

SECTOR 1

SECTOR 2

SECTOR 3

SECTOR 4

SECTOR 5

SECTOR 6

SECTOR 18

SECTOR 21

SECTOR 22

SECTOR 23

REYES LOS LAURELES

TONCOSITA

Tegucigalpa

Lista de barrios, colonias y residenciales/condominios/aldeas

Datos proporcionados por Metroplan, abril de 2006.

<i>Sector</i>	<i>Barrios</i>	<i>Colonias</i>	<i>Residencial, aldeas, condominios</i>
1	16	-	-
2	16	4	-
3	11	1	1
4	3	4	-
5	4	4	-
6	14	3	-
7	9	53	-
8	8	10	3
9	2	14	3
10	-	17	1
11	-	9	2
12	5	19	7
13	2	43	7
14	-	1	9
15	-	-	12
16	1	23	4
17	-	5	5
18	1	11	3
19	1	26	11
20	-	-	-
21	1	8	2
22	2	17	-
23	-	15	2
24	-	19	3
25	-	16	3
26	-	2	2
27	-	1	7
28	1	4	7
29	-	14	4
38	-	-	1
55	-	-	1
<u>Total</u>	97	353	100

Apéndice 7.6

No.	Nombre del Establecimiento	Año de Inicio de Operaciones	Licencia Ambiental	Permiso Municipal de Operaciones
1	ANDIFAR	1972	NO	SI
2	Aserradero Sansone	1957	NO	SI
3	Baterías Lightning	N.D.	N.A.	N.A.
4	Baterías Omega	1985	NO	SI
5	Baterías Yojoa	1975	SI	NO
6	CADECA	1972	NO	SI
7	Café el Indio	1933	NO	SI
8	CAPRISA	1966	NO	SI
9	Cervecería Hondureña	1916	SI	NO
10	CONPACASA	1958	SI	SI
11	Corporación Flores (Taller de Mantenimiento)	1970	NO	SI
12	Embotelladora La Reina	1940	NO	NO
13	Embutidos Europea	1967	SI	NO
14	Laboratorio Francelia	N.D.	NO	SI
15	Granitos y Terrazos	1965	N.D.	N.D.
16	Honduras Fosforera	1981	NO	NO
17	Industria Confitera Venadito	1967	NO	SI
18	LACTHOSA	1972	SI	NO
19	Licorera Los Ángeles	1972	N.D.	N.D.
20	Lido Pozuelo	1988	N.D.	SI
21	Mármoles de Honduras	1962	NO	NO
22	PROMDECA	1979	NO	NO
23	Planta de Tratamiento Los Laureles	1976	NO	NO
24	Plásticos Estrella	1979	NO	NO
25	Pollos El Cortijo	1960	NO	SI
26	PROCOHSA	N.D.	SI	NO
27	Químicas Magna	N.D.	SI	SI
28	Botadero Municipal	1979	NO	NO
29	Resinera Maya	1973	NO	N.D.
30	Textiles Río Lindo	1960	NO	SI

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ESTOCOLMO -TEGUCIGALPA, 5 ABRIL 2006**

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Estocolmo -Tegucigalpa 5 Abril 2006-04-05

Taller evaluativo

El Sr. Albio González dio la bienvenida a la reunión y pidió que los participantes se presentaran. El grupo estaba compuesto por unas 25 personas, que representaban la administración pasada y la presente, compañías privadas, hospitales y la sociedad civil. Antes de dar la palabra a Don Carlos Rivas, Oficial de Programa de la oficina local de Asdi, el Sr. González informó brevemente sobre el conjunto de proyectos que se iban a tratar en el taller.

El Sr. Rivas ofreció a modo de introducción al taller, un breve resumen sobre la cooperación entre Suecia y Honduras, refiriéndose a la Declaración de Estocolmo y a la importancia de que la sociedad civil esté involucrada en los proyectos; dando seguidamente una reseña histórica sobre los acuerdos establecidos entre Suecia y Honduras después del desastre causado por el huracán Mitch. Comentó además, sobre el origen de la "hermandad" entre las ciudades de Estocolmo y Tegucigalpa con el fin de intercambiar experiencias y capacidades a nivel institucional. En este contexto, enfocó el tema de la gestión y manejo de desechos sólidos que ha sido identificado como un problema grave de la ciudad de Tegucigalpa y un área en la que Estocolmo cuenta con amplia experiencia..

El Sr. Rivas explicó a los participantes que era importante que esta reunión tuviera como meta identificar las experiencias adquiridas en los proyectos de la cooperación Estocolmo-Tegucigalpa y cómo estas experiencias podrían beneficiar a las partes cooperantes y a la sociedad civil. Aclaró que la razón principal por la que Asdi tiene oficina en Tegucigalpa es por hacer llegar su apoyo a los sectores más pobres de la población, así como para facilitar el establecimiento de mecanismos que ayuden a mejorar la equidad de géneros y la justicia social. Además hizo hincapié en que el taller debería ser un foro llevado a cabo dentro de un ambiente relajado y transparente donde no se juzgue a las personas sino a los temas y problemas técnico-ambientales o sociales a los que se ha tratado de dar solución en los los proyectos, Resaltó la importancia de recordar que la cooperación relacionada con los proyectos es una cooperación entre gobiernos e instituciones, no entre personas.

El Sr. Rivas indicó también a los participantes, que en Honduras muchas veces es fácil que un proyecto cumpla con sus metas, pero que éste pocas veces logra cumplir su objetivo. Don Carlos terminó con un anuncio triste, ya que un familiar suyo había sido asesinado la noche anterior y debido a este incidente, debía ausentarse y no podía seguir asistiendo a la reunión.

A continuación el Sr. González comenzó la reunión refiriéndose a la razón por la que se convocaba al taller y que objetivos se querían lograr con el mismo. Seguidamente hizo una introducción de los cuatro sub-proyectos a ser evaluados.

Presentación de las experiencias del Sub-proyecto 1: Fortalecimiento y asesoría institucional en el manejo de los desechos sólidos

El Sr. Jonathan Laínez, anterior Director de la UGAM, se refirió a las experiencias obtenidas en los cuatro sub-proyectos entre los años 2002-2005, haciendo hincapié en los sub-proyectos 1 y 2.

Una de las actividades más significativas del Sub-proyecto 1, fue la preparación de un plan estratégico para el manejo de los desechos sólidos en Tegucigalpa. Este plan fue iniciado por ser un requisito del Banco Interamericano de Desarrollo (BID), Dicho plan, presentado por la Alcaldía de Tegucigalpa, estuvo listo a finales de 2002, gracias a la asistencia de los asesores suecos del Sub-proyecto 1 y la oficina de Asdi en Tegucigalpa.

El Plan Estratégico tuvo ciertos logros y un ejemplo de esto lo constituye el plan social para los pepenadores (personas que viven de la basura). También se hizo un plan de cobertura del servicio, que mejoró la gestión del manejo de desechos sólidos con una regularidad de recogida de 3 veces por semana.

Se inició además, un proceso para facilitar que el municipio contratara al sector privado para la recolección de desechos comunes en el resto de la cobertura del servicio, Se logró efectuar una licitación donde una compañía fue seleccionada entre las cuatro finalistas. Parte del proyecto de privatización fue el identificar un sitio para el nuevo relleno sanitario (botadero).

El Sr. Laínez concluyó afirmando que en general, todo el Sub-proyecto 1 fue realizado razonablemente bien, quedando pendiente la terminación y las funciones del nuevo relleno (que estaba aun en su etapa de diseño).

En los comentarios relacionados con la presentación del Sr. Laínez, se resaltó la importancia de este primer sub-proyecto, el cual tenía componentes y resultados que en su momento tuvieron consecuencias en los demás sub-proyectos. Además se observó que este primer sub-proyecto facilitó la puesta en marcha del resto de los otros sub-proyectos.

Se debatió la necesidad de agregar regulaciones más específicas durante el periodo de implementación del sub-proyecto para los diferentes generadores de basura, planteándose como posible solución, hacer contratos específicos para la recolección de desechos de hospitales y de industrias, etc. Sin embargo, esta alternativa de solución no pareció ser viable debido a la escasez de los recursos existentes. Otro problema identificado fue la duración del proceso de licitación que es demasiado largo.

Se destacó además que las instituciones y zonas urbanas generan acumulaciones de basura pero que no quieren pagar por el servicio de recolección; como en el caso planteado por los representantes de la comunidad de Carrizal, los cuales reclamaron que no es fácil pagar por este servicio cuando los que habitan las viviendas no cuentan con un título de propiedad. Adujeron además que hay largas demoras y mala gestión en el

proceso de legalización de la tierra y que no hay canales establecidos para pagar los impuestos. Simón Rojas, coordinador de la comunidad de Carrizal, planteó que la gente en su colonia está bien dispuesta a pagar por el servicio de recolección, con la condición de que el servicio sea regular y eficiente y que existan canales fiables para pagar las tarifas.

Experiencias del Sub-proyecto 2: Programa de monitoreo de desechos industriales

Sobre el Sub-proyecto 2, el Sr. Laínez explicó los pasos iniciales dados con el análisis de "todas las empresas de Tegucigalpa". Explicó que se llevaron a cabo varias inspecciones donde se identificaron las distintas categorías de industrias, sus productos, sus niveles de manejo ambiental, sus desechos, el por ciento de desechos peligrosos etc. Se intentaba definir una estrategia operacional para el manejo ambiental de las empresas, algo que se logró realizar en algunas de las industrias.

Sin embargo, había problemas; ya que muchas de las direcciones de industrias temían ser multadas en caso de ser inspeccionadas y por esto impedían las visitas de inspectores. Este problema mejoró una vez comenzados los contactos con la Cámara de Comercio que ayudó a obtener los permisos necesarios.

La ingeniera Carol Perdomo, consultora de la compañía Ingeniería y Ambiente de Sula (IdAS), concluyó la presentación comenzada por el ing. Laínez informando sobre la segunda fase del proyecto, el entrenamiento y capacitación de la Producción Más Limpia, organizado por SWECO y IAdS. Los participantes estaban conscientes de que no se exigía nada sobre producción limpia a nivel nacional y por lo tanto, sería difícil que las industrias cumplan con este propósito.

De las 30 compañías que se estudiaron inicialmente, se brindó capacitación a sólo tres de ellas, las cuales fueron elegidas siguiendo diferentes criterios (ver el informe final del proyecto), además, se les dio capacitación a las unidades de la Alcaldía (UGAM, SERNA, Desechos Sólidos) responsables de la supervisión y monitoreo de las industrias.

Un problema experimentado durante la implementación del Sub-proyecto 2 en su primera fase, estuvo relacionado con las dificultades causadas por la comunicación (no hablar castellano) entre los asesores de Suecia y los trabajadores a nivel técnico de las industrias.

Otra dificultad experimentada en la capacitación y supervisión de la producción limpia, estuvo dada por el desconocimiento de los inspectores de los diferentes procesos de producción y procesamiento de desechos. A pesar de que la capacitación resultó ser muy positiva, hubiera sido más provechoso definir programas sobre el manejo de desechos más específicos para los diferentes tipos de industrias.

Se consideró que la participación en el ejercicio de la capacitación fue algo difícil de realizar ya que era de forma voluntaria y se efectuó fuera del plan de trabajo cotidiano. Se

concluyó que la capacitación llevada a cabo fue muy buena. No obstante, es lamentable que la mayoría de las personas capacitadas no trabajen acualmente en sus cargos, lo que debilita la capacidad de supervisión a nivel institucional.

Experiencias del Sub-proyecto 3: Información municipal en la gestión de desechos sólidos y el medioambiente

El Sr. Eduardo Sánchez, que anteriormente trabajaba en la Unidad de Servicios Sociales, se refirió a los tres componentes de este proyecto:

- Capacitación en comunicación para las partes involucradas
- Creación de una campaña informativa
- Intercambio de conocimientos entre jóvenes hondureños y suecos.

El primer componente, que contenía un programa de capacitación sobre información ambiental en la Alcaldía, fue muy bien acogida por varias unidades del gobierno municipal. Se planteó que la manera en que se trabajaba en este proyecto con la información a las comunidades era algo nuevo. Anteriormente se habían hecho varias campañas para ocuparse y cuidar el medio ambiente pero nunca antes se había logrado que las personas realmente participaran en esta labor. La idea de mantener su comunidad limpia llegó realmente a los mismos residentes de los barrios y no quedó como un mensaje vacío que luego se olvida. Este resultado fue logrado quizás, gracias a que las comunidades en Villa Nueva y Carrizal se sintieron dueñas y protagonistas del proyecto, sintiendo que ellas, a nivel personal, ejercían un impacto positivo en la realización de las actividades.

Un aspecto negativo de la implementación de este sub-proyecto es que casi todo el personal de las unidades de la Alcaldía que trabajaba en el mismo, ya no están en sus puestos. Por otra parte, el proyecto sufrió también las consecuencias ocasionadas por ciertos problemas personales, que tal vez hayan causado la cesantía de algunos funcionarios.

Para garantizar que este proyecto sea sostenible, se necesitaría una mayor y más fuerte organización dentro de la comunidad, a la vez que exista una dedicación y voluntad política por parte de la nueva administración municipal. Será necesario establecer convenios o acuerdos para contar con regulaciones en las cuales apoyarse aunque hayan cambios de gobierno. Y por último, crear y asegurar los mecanismos para que los beneficiarios y en general las personas que viven en los barrios en vía de desarrollo, participen y hagan suyos los proyectos.

“Si hay voluntad por parte de la Alcaldía, la comunidad está dispuesta a colaborar!”

Experiencias del Sub-proyecto 4: Manejo de desechos hospitalarios

La Ingeniera Marcela García de la Compañía Ingeniería y Ambiente de Sula llevó la presentación de este sub-proyecto, en el cual ha estado colaborando desde que empezó en 2004. Explicó que este sub-proyecto tuvo desde temprano muy buena cooperación entre los hospitales, IAdS, SWECO, la Secretaría de Salud y unidades de la Alcaldía. Fue un proyecto complejo pero con muchos éxitos y logros.

Este proyecto se realizó con tres componentes fundamentales:

- Manejo Interno de desechos hospitalarios
- Manejo externo de desechos hospitalarios
- Un arreglo financiero e institucional para el manejo de los desechos hospitalarios

La Ing. García explicó cuales fueron las actividades que constituyeron cada componente y que el manejo externo siempre es muy complejo, ya que depende de la colaboración entre el hospital, la compañía que recoge la basura y el municipio, que es quien gestiona el botadero (incluyendo una concienciación de las personas que trabajan en él como "pepenadores"). Inicialmente, todos los desechos estaban mezclados y era botados en un mismo lugar, o sea, no había separación entre desechos comunes y desechos peligrosos, algo que se ha logrado mejorar con la implementación del sub-proyecto, principalmente, en algunos de los hospitales. Además, se ha logrado que exista un lugar en el botadero donde sólo se deben depositar exclusivamente los desechos peligrosos (las bolsas rojas de los hospitales). Esto es un logro en sí, aunque todavía habrá que hacerlo más eficientemente y asegurar que este espacio sea inaccesible a las personas que trabajen en el botadero.

La Secretaría de Salud y la Gerencia Ambiental deberán mantener una buena colaboración sobre el manejo interno de los desechos para exigir que los hospitales obtengan su licencia ambiental.

Durante las discusiones relacionadas con la presentación de este sub-proyecto, se discutió el problema de la constante rotación del personal, que afecta negativamente los objetivos del proyecto ya que se pierden las experiencias obtenidas por personas capacitadas en el campo del manejo ambiental. Además, es importante que dentro de los mismos hospitales haya un plan de prioridades, donde se expliquen bien las metas más importantes que se quieren cumplir relacionadas con la gestión de los desechos.

Según la Dra. Ritza Lizardo de la Secretaría de Salud, se están planificando otros programas de capacitación que se espera tengan un impacto a largo plazo.

La Ing. García explicó que en el plan de acción que se ha elaborado para los hospitales pilotos del proyecto, está planteado que es de importancia fundamental, que la Secretaría de Salud y la Gerencia Ambiental cooperen para asegurar que se obtengan licencias ambientales y para que se pueda iniciar un sistema sostenible de supervisión y monitoreo del manejo ambiental de los hospitales.

Cuando los hospitales hayan logrado separar sus desechos, se necesitará asegurar que cada tipo de desecho sea embasado y trasladado según sus características, donde no se

mezclen los desechos peligrosos con los comunes. Hará falta que el municipio/la SERNA asegure que los contratos entre hospitales y recolectores sean adecuados y accesibles.

El sub-proyecto logró que fuera retomado el interés por un reglamento de desechos de hospitales que había estado "en desuso" en años. Gracias al sub-proyecto, el reglamento ha sido firmado y cuando entre en vigor, será aplicado a cada instituto de salud a nivel nacional, de esta manera será más fácil continuar la gestión de los desechos de hospitales. El Ministerio de Salud está muy interesado en que este reglamento empiece a funcionar lo antes posible.

El taller reveló que no todas las unidades de la Alcaldía fueron informadas sobre el reglamento y que en otros casos, se ignoraron sus recomendaciones. Sin embargo, algunos de los participantes del taller afirmaron que el reglamento sí se había revisado por varias instancias siguiendo un proceso transparente.

Quedó claro que tanto en este sub-proyecto, como en los otros, era fundamental que NO HUBIERA DIVORCIO entre las diferentes unidades de la Alcaldía. Para que la gestión de desechos sólidos pueda ser sostenible, habrá que asegurar que cada una de las partes involucradas cumpla con su responsabilidad en el proceso del manejo, desde el origen del desecho hasta su tratamiento final.

La falta de comunicación y coordinación ha sido un obstáculo constante en todos los sub-proyectos y se consideró que hay que trabajar fuertemente para superar esta dificultad que existe entre las varias unidades de la Alcaldía, dentro de las mismas unidades, y entre la alcaldía y la comunidad.

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Sub-proyecto 1; Fortalecimiento y asesoría institucional en el manejo de los desechos sólidos	Contrapartes Hondureñas entre 2001-2005	Contrapartes Suecos 2001-2005
Ing. Martin Quan	2002-2004: Alcaldía/Contraparte municipal de la Unidad de Desechos sólidos	Ia Johansson -Stockholm City, responsible for prestudies of all sub-projects 1999-2000 in collaboration with SWECO and Magnus Montelius.
Ing. Alfredo Di Palma	2002-2004: Unidad ejecutiva préstamos/ División de Servicios Sociales (Consultor)	June 2001-June 2003; Johan Torberger took over Ia's role. JT and Magnus Montelius implemented sub-project 1. (1a and 1b)
Dra. Waleska Pastor	Gerente General	J.T was responsible, M.M technical advisor
Ing. Jonathan Láinez	Jefe de UGAM	
Ing. Selvin Zelaya	Dir. SERNA	
Ing. Mauricio Alvarenga	Alcaldía/Unidad de Desechos Sólidos (Subdirector)	
Sub-proyecto 2; Programa de Supervisión Regulatorio de los desechos industriales		
Ing. Carmen Elena Padilla	2002- 2005; Alcaldía/UGAM/ Evaluación y Control + Coordinadora de Información Ambiental	Johan Torberger/City of Stockholm: June-September 2001.
Ing. Loyra Herrera	UGAM	J.T was represented by Katrin Ottosson fr Oct 2001-Dec 2003. K.O did an analysis of the existing industries, current regulations, license processes and supervision requirements
Ing. Fátima Flores	UGAM	The City of Stockholm resigned from the project coordination responsibility in December 2003.
Ing. Jonathan Láinez	Jefe de UGAM	January 2005: Two weeks training/Assessment by SWECO (in coop w the Honduran counterpart IAoS). Participants mainly from UGAM, SERNA, Desechos Sólidos and Unidad de Servicios Sociales
Dra. Waleska Pastor	Gerente General	
Dr. Alex Padilla	SERNA/CESCO	
Ing. Gino Brissio	Sub-director en SERNA	
Ing. Oscar Verganza	UGAM	
Ing. Claudia Cárcamo	UGAM	
Ing. Belinda Alcántara	UGAM	
Ing. Sara Avila	UGAM	
Ing. Marcela García	IAoS	
Ing. Carol Pérdomo	IAoS	

<p>Sub-proyecto 3; Desarrollo de la información municipal con el enfoque en los desechos sólidos y el medio ambiente</p>		
<p>Thyrza Ardón Maxine Sierra Eduardo Sanchez Ing. Maricela Tursios Wendy Aguilar Simón Rojas Isabel Rico Ing. Jonathan Láinez Ing. Mauricio Alvarenga Manuel Antonio Morales</p>	<p>2002-2004; Alcaldía/UGAM/ Coordinadora de Comunicación. Contratado por GR 2004-2005, "líder local" del sub-proyecto 3. Alcaldía/UGAM/Educación Ambiental Alcaldía/ Unidad de Servicios Sociales Alcaldía/ Unidad de Servicios Sociales (Jefa) Compartir (ONG) Coordinador Carrizal Coordinadora Villanueva Jefe UGAM Alcaldía/Unidad de Desechos Sólidos (Subdirector)</p>	<p>Karin Maria Johansson and Barbro Asp –City of Stockholm -were initially responsible for the project. Katrin Ottoson assisted. The City of Stockholm resigned from the project in April 2004 and Global Reporting took over, supported by the City of Stockholm.</p>
<p>Sub-proyecto 4; Manejo de desechos hospitalarios</p>		
<p>Ing. Carmen Elena Padilla Ing. Loira Herrera Ing. Mauricio Alvarenga Ing. Jonathan Láinez Dra. Waleska Pastor Dra. Ritza Lizardo Ing. Oscar Herrera Dr. Jorge Crespo Dr. Alex Padilla Ing. Marcela García Ing. Carol Pérdomo</p>	<p>2002- 2005; UGAM/ Evaluación y Control + Coordinadora de Información Ambiental Alcaldía/Unidad de Desechos Sólidos (Subdirector) Jefe UGAM Gerente General Secretaría de Salud Secretaría de Salud Secretaría de Salud SERNA/ SESCCO IAdS IAdS</p>	<p>Katrin Ottoson (sub-project leader) and Inger Johed partook in the initiation of the project on behalf of Stockholm Stad in September 2003. CO resigned in Dec 2003. February 2004 –October 2005; SWECO took over and implemented the sub-project in cooperation with IAdS, Inger Johed and Sverker Snidare Ab.</p>