



A dream of green and water: community based formulation of a Local Agenda 21 in peri-urban Lima

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1. See, for instance, ICLEI (1996), *Manual de planificación para la Agenda 21 Local, una introducción a la planificación sostenible*, ICLEI, Toronto.

2. Agenda 21 is the main document coming out of the UN Conference on

SUMMARY: This paper describes how an integrated environmental plan was developed by the inhabitants of informal settlements on the edge of Lima, Peru – and how this formed the basis both for local action and for negotiating support from external agencies. It discusses the measures taken to ensure real community participation and to avoid the imposition of professionally-driven “solutions”. It describes the different internal and external groups that were involved and considers the limitations of most international donor funding for such Local Agenda 21s because such funding is too “project cycle” oriented and too concerned with “outputs” that have to be identified at the outset to be able to support such participatory processes.

I. THE CONTEXT

a. Introduction

IN BOTH THE Habitat Agenda, which resulted from the second UN Conference on Human Settlements in Istanbul in 1996, and in guidelines for preparing a Local Agenda 21,⁽¹⁾ strong emphasis is put on the “local level” and on the importance of local government in taking the lead in the search for sustainable urban development. Many problems and solutions that Agenda 21 is meant to address⁽²⁾ have their roots in local activities, and local government is the entity constructing, operating and maintaining economic, social and environmental infrastructure at the local level, and is the government level closest to the people.⁽³⁾

The reality in most low-income urban neighbourhoods in Latin America, Asia and Africa is that government – both at the local and higher levels – takes a reactive rather than a pro-active role. The initiative of founding and developing a neighbourhood often does not lie with local government but stems from people’s own actions. Once an area is invaded, people start to build houses, construct provisional roads and drainage and open shops; local government and public entities do react to these developments. Most investments made to improve the urban habitat in low-income neighbourhoods, both in terms of human and financial resources, come from the inhabitants.

This paper argues that strengthening community⁽⁴⁾ initiatives by offering technical assistance to the inhabitants of low-income neighbourhoods in their quest for improving their living environment should be an integral

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part of the formulation and implementation of a Local Agenda 21. It presents a case study of a small-scale project in Pampas de San Juan, a squatter settlement in southern Lima, which analyzes the role of the different actors in the process and which indicates the possibilities and limitations of this community based approach. The paper describes the development of a Local Agenda 21 “the other way round”, starting at neighbourhood level and finally leading to the involvement of local government and other institutions in formulating a more coherent plan based on the principles of a Local Agenda 21.

Before presenting the case study, some theoretical considerations will be introduced on the nature of urban environmental problems in low-income neighbourhoods, and on the art of neighbourhood based environmental management. Eight propositions are advanced:

- Both the Habitat Agenda and Local Agenda 21 are powerful policy instruments for governments. However, most city inhabitants know little if anything about Local Agenda 21 or the Habitat Agenda and find it difficult to relate these texts to their existing initiatives and struggles.
- If a Local Agenda 21 is meant to include the sustainable development of low-income settlements, its development has to be based on existing initiatives. Since internationally endorsed documents lay considerable stress on supporting participation and community action, these agendas can legitimize community initiatives and struggles. However, developing an Agenda 21 from the bottom up requires a much longer process than is usually taken for the formulation of a Local Agenda 21.
- A Local Agenda 21 is often interpreted as an environmental agenda. This is not correct. A Local Agenda 21 should combine social, economic and environmental goals. In low-income neighbourhoods, improving the urban habitat should be understood not only as a strategy for improving health and well-being but also as a strategy for local economic development. The cleaner and better developed the neighbourhood, the more attractive it is for economic activities.⁽⁵⁾
- A “community” is not a homogeneous and even less a harmonious unity. Within virtually all communities, there are conflicting interests – for instance, between the elected leaders and particular sections of the population, between the poorest and those a little better off, between women and men and between younger and older people. Thus, the participation of community leaders in formulating and implementing agendas or projects does not guarantee that the community as a whole is represented. Community leaders often represent limited interests, if not only their own interests. Reaching agreement with community leaders does not guarantee that the information about the agreement reaches the community or that the community identifies with the Local Agenda 21 – or that they will contribute to its implementation.
- The inhabitants of the low-income neighbourhoods share a responsibility with government and other agencies for improving environmental conditions of their neighbourhood. It is a household responsibility to maintain the immediate living environment in a clean and healthy state without simply transferring household problems to the neighbourhood or city (for instance, by dumping liquid or solid wastes outside the house). The higher the capital investment required for neighbourhood improvement, the more vital the involvement of external actors. Sustainable development goals can, however, only be reached when inhabitants share the responsibility for long-term investments and maintenance.
- The inhabitants of low-income neighbourhoods are capable of defining

Environment and Development in 1992 (also known as the Earth Summit) that was formally endorsed by all governments attending and which is meant to provide governments with guidelines on achieving sustainable development.

3. United Nations (1992), *Earth Summit, Agenda 21: The United Nations Programme of Action from Rio*, New York, page 20.

4. “Community” is an elusive concept which can be used in many senses and which has various meanings. Often, it does not define who does or does not belong to the community nor where community boundaries lie. “Community participation” supposes that community interests are represented. But whose interests? In this paper, the word “community” is only used to refer to concepts such as “community based organizations” and “community participation”. Wherever possible, more precise concepts are used such as “settlement”, “neighbourhood”, “neighbourhood organization”, “neighbourhood leader” and “inhabitant”.

5. See, for instance, Ard-Am, O (Orothai) and others (1994), “Household economy and environmental management: the cases of Wat Chonglom and Yen-ar-kard” in *Asian Journal of Environmental Management*, Vol.2, No.1., Hong Kong University, Hong Kong, pages 37-48.

6. Different guidelines and manuals give different names to this step in the process of formulating a Local Agenda 21 – for instance, long-term vision (UNCHS), or common community vision (*visión comunitaria común*) (ICLEI). The term “shared vision of the future” stems from the Peruvian National Campaign of Local Agenda 21 (*visión compartida del futuro*).

7. Leitmann, J. (1994), *Rapid Urban Environmental Assessment; Lessons from Cities in the Developing World; Volume 1: Methodology and Preliminary Findings*, Urban Management Programme, Nairobi.

8. Gore, A. (1992), *Earth in the Balance: Ecology and the Human Spirit*, Houghton Mifflin Company, New York.

9. NAR (1994), *Urban Poverty Alleviation and Development Cooperation Policy Advice*, National Advisory Council for Development Cooperation (NAR), DGIS, The Hague.

the factors that inhibit the sustainable development of their settlement and of identifying viable solutions. From common sense and life experience, they develop knowledge rooted in the social, economic and physical reality of their neighbourhood which complements the technical knowledge of any trained external professional.

- Developing a shared vision of the future⁽⁶⁾ and assigning responsibilities to each actor provides the neighbourhood with a powerful management tool in the struggle for improvement. Even more important is that it puts the responsibility for the quality of the living environment back into the hands of the inhabitants by defining what can be dealt with by community action and where outside assistance should be sought.
- The current structure of development cooperation is contradictory. (Local) NGOs are thought to be the actors closest to poor people and to represent their interests. But the tight budgets and result-oriented project finance inhibit NGOs from fulfilling their role.

b. Urban Environmental Problems and the Transfer of Consequences

Urban environmental problems in Africa, Asia and Latin America are now well-known on a general level owing to intensive work of many agencies and institutes over the last decade. The causes of urban environmental problems are often sought in poverty, poor management practices and inadequate technologies. Leitmann mentions the following causes:

- lack of public and political interest
- governance problems
- inadequate and inefficient legal and economic policies
- lack of knowledge and information⁽⁷⁾

Although these factors are of great importance in actual urban environmental problems, they do not touch the societal roots of the problem. The roots of many environmental problems, both urban and general, are to be found in the ways that individuals, households or businesses can transfer their environmental costs. Instead of taking responsibility for the environmental costs we generate, we evade this and transfer the consequences to others.⁽⁸⁾ The environmental consequences of certain activities can be transferred within three dimensions:

- transfer to a higher geographical level of scale (e.g. household to neighbourhood);
- transfer through time, drawing down non-renewable resources so that there is less available for future generations; and
- transfer from the individual to the collective level: the sum of all individual rational actions leads to collective unacceptable consequences.⁽⁹⁾

The most visible and well-known is the transfer of consequences to other spatial levels. Transferring environmental costs can almost become a policy as, for example, when chimney heights are increased to ensure that the air pollution created will have effect further away. Another example is the way in which many companies in Europe and North America sought to cheapen the costs of disposal by simply shipping untreated hazardous wastes to countries in Latin America, Asia or Africa.

Transfer through time occurs when consequences are transferred to future generations. Examples include the use or degradation of resources or the generation of wastes with dangerous ecological consequences which have the effect of “compromising the needs of future generations”. Transfer over time is most often related to the degradation of natural

resources (including soils and forests) and the generation of wastes which may cause long-term ecological damage or destabilize the world's climate (as in the generation of greenhouse gases).

Examples of transfer from the individual to the collective level, where the sum of all individual rational actions leads to collective unacceptable consequences, are more difficult to identify. It can be seen when it comes to the discharge of biodegradable wastes. From the point of view of one private enterprise, the discharge of a limited amount of waste water into a river might be environmentally sound, but the sum of all discharges from all industries using the same river might exceed the self-cleaning capacity of the water and will lead to a decrease in water quality. One inadequate latrine in a rural area may cause problems for the family using it but will have no environmental consequences. Many inadequate latrines in a densely populated area can convert a household-level problem into a neighbourhood problem.

Transfer mechanisms are more obvious in urban areas due to the high concentration of population, production and consumption. This holds true especially for transfer over the geographical dimension. When households dump their wastes onto the street or in a nearby open space – for instance, because of a lack of proper collection – they literally transfer the problem to their neighbours. Sometimes, waste is dumped in neighbouring areas or on open land between neighbourhoods or in drainage ditches, which reduces their effectiveness. Waste dumped in rivers similarly goes somewhere else, causing problems for neighbourhoods downstream.

The cumulative effects of these pollution and transfer mechanisms manifest themselves at the global scale through a loss in biodiversity, the depletion of the stratospheric ozone layer and atmospheric warming from increasing concentrations of greenhouse gases.

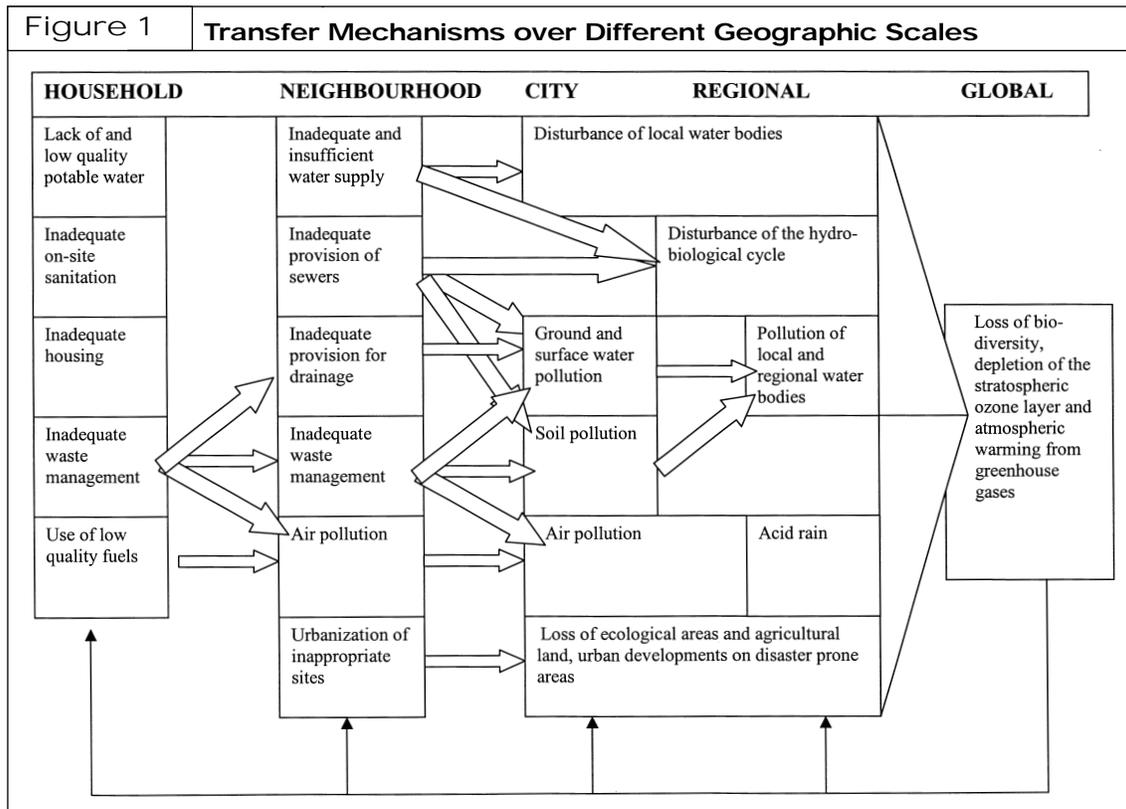
Figure 1 shows the transfer mechanisms that can be identified when classifying the environmental problems at different geographical levels. There is an important difference between the urban environmental problems in high-income countries and those in low and most middle-income countries (and, especially, within these in the poor districts within cities). Urban residents in the poorer districts in the South have to live with the direct consequences of environmental problems and the related health risks.

As cities get larger and their inhabitants wealthier, they can transfer their environmental problems away from their homes and neighbourhoods to other people and regions. "Many environmental services such as piped water, sewerage connections, electricity and door to door garbage collection not only export pollution (from the household to the city) but also shift both the intellectual and practical burdens of environmental management from the household to the government or utility."⁽¹⁰⁾

Taking the transfer mechanisms into account broadens the task of each actor when it comes to urban environmental management. When trying to manage the urban environment, one should not only search for solutions within a certain locality but also take into account the effects of any solution on other places, at a global level or in terms of consequences for future generations. This holds true for actors at all levels, starting at the household and the neighbourhood level.

The project described below is based on the principle of both individual and collective responsibility for the living environment. Taking as a point of departure the urgent need that the inhabitants felt for improving their living environment, the project worked towards broadening the circle of responsibilities assumed by the inhabitants. This meant broad-

10. McGranahan, Gordon, Jacob Songsore and Marianne Kjellén (1996), "Sustainability, poverty and the urban environmental transitions" in Pugh, Cedric (editor) *Sustainability, the Environment and Urbanization*, Earthscan, London, pages 103-134.



ening the responsibility from the level of the household and the house towards responsibility for the street and the privately assigned small green areas and, finally, responsibility for the settlement as a whole. This process was partly one of recovering the previously felt shared responsibility that characterized the first years of settlement consolidation in Peru. It was also partly a search for new social forms that would open up spaces for those willing to take responsibility for their settlement. Most inhabitants responded to this out of the strongly felt need to prevent the health risks that stemmed from environmental conditions, as well as the strong desire to beautify their living environment.

II. INTRODUCING PAMPAS DE SAN JUAN

a. Physical and Social Characteristics

THE PROJECT WAS implemented in the youngest settlements in Pampas de San Juan, one of the more recently settled zones in the urban periphery of southern Lima Metropolitana. Lima is characterized by an extended flat desert plain delimited by the Pacific Ocean to the west and by steep slopes (the foothills of the Andes mountains) to the east. Since the 1950s, Lima's physical growth has taken place mainly through invasions or the steady occupation of vacant desert land along the major exit routes to the north, south and east. As each successive invasion or occupation of land moved further away from the city centre, for some it became more attractive to settle on the steep slopes which were not so distant from the centre despite

all the difficulties this implies in terms of accessibility, the provision of basic services and (self-help) building. The youngest settlements in Pampas are an example of this steady occupation of steep slopes.

Pampas de San Juan is one of the six zones in the district of San Juan de Miraflores. As a district, San Juan de Miraflores has its roots in an invasion in the 1950s, but the zone of Pampas de San Juan remained untouched for a long time.⁽¹¹⁾ The first invasions took place in 1979, with massive invasions starting in 1983. By 1986, Lima metropolitan government had implemented an extensive programme legalizing land ownership in the area, in order to put a halt to widely spread corruption and land speculation. In the years thereafter, invasions continued both on the steep hills and in areas which in the original neighbourhoods had been reserved as "public space". This process resulted in a heterogeneous mix of consolidated and unconsolidated settlements.

It is astonishing to see what people can create through their own efforts. Careful communal work has resulted in roads being opened up on the steep slopes. Staircases have been built into the rock and small Andean-like terraces have been constructed with stones. Although every drop of water had to be carried uphill in the first years, several people managed to bring some green to the desert because "a house is not a house if there are no plants". Communal spaces were created providing a crèche, a communal kitchen where cheap meals are produced and a space for community meetings.

But this process of building a city through self-help also has its limitations. Once land is invaded, the long process of getting official approval to stay begins. During this process, the inhabitants have to depend on professionals. They must contract architects, urban planners and engineers to draw their urban plans, plan their future neighbourhoods and make provision for electricity, water and sewerage. Each small neighbourhood follows its own cycle through all the steps that are necessary to obtain official approval. But the maps and plans drawn by the professionals are often of very low quality with the result that the whole consolidation process is based on plans and papers that do not reflect the reality. Badly designed maps lead to badly designed urban development plans, which makes it difficult, at a later stage, to build roads or install water and sewage pipes.

In summary, the Limenean reality in the shanty towns on the urban fringe shows an amazing force of poor people building a city from the bottom up, a process often called "spontaneous". If "spontaneous" is taken as meaning "unplanned," this is not correct because people try to organize their living environment as well as they can.⁽¹²⁾ But the existing forces of urban planning, starting with the first urban plans that have to be designed, have no adequate responses to this process. The lack of good quality technical assistance in both the planning and the building processes results in a chaotic urban weaving where each error in the first stages leads to more problems in later stages. The building process produces an urban landscape that neither follows the original natural landscape nor offers a coherent urban environment and contributes to all environmental, health and economic problems.

b. The Origin of the Project on Participatory Environmental Diagnosis

The roots of this project lie in several meetings held in the different zones of Pampas de San Juan where, in a participatory way, a self-diagnosis of

11. A considerable part of it was known to be private property. In Peru, invasions on private land tend to be far less successful than invasions on public land. When the land of Pampas fell back into the hands of the state, invasions started.

12. Riofrío, G. (1991), *Producir la Ciudad Popular de los '90: Entre el Mercado y el Estado*, DESCO, Lima.

the environmental conditions was made. The neighbourhood workshops led to several conclusions:

- The strongest felt needs were paved roads and sidewalks, improving solid waste collection and greening the area (parks, gardens and foresting the hillsides).
- Several of the problems identified were the result of the settlement-by-settlement approach which led to roads with no connections, other infrastructure without connection and isolated areas of green land which had become garbage dumps. It showed the need for overall planning of the zone that still had no legal title.
- An overall improvement programme for the area was inhibited by the fact that the zone was so heterogeneous in terms of land tenure. An integrated plan for the area as a whole would not be possible until all property rights were resolved, since the inhabitants would never know what government agencies would (or would not) do to remodel the settlement and install the planned infrastructure. A first step had to be help in legalizing land property in the informal settlements.
- A strong desire for greening the area was expressed. Greening requires water, which is a very scarce resource in the desert city of Lima. It is impossible for people to water and maintain a park when there is no adequate water provision. Inhabitants saw no problem in watering parks with potable water but solutions to the city's water problems had to be sought.
- An integrated neighbourhood improvement programme, taking the inhabitants' expressed environmental and health needs as a point of departure, required outside assistance, both in professional and financial terms, and alliances with other actors.

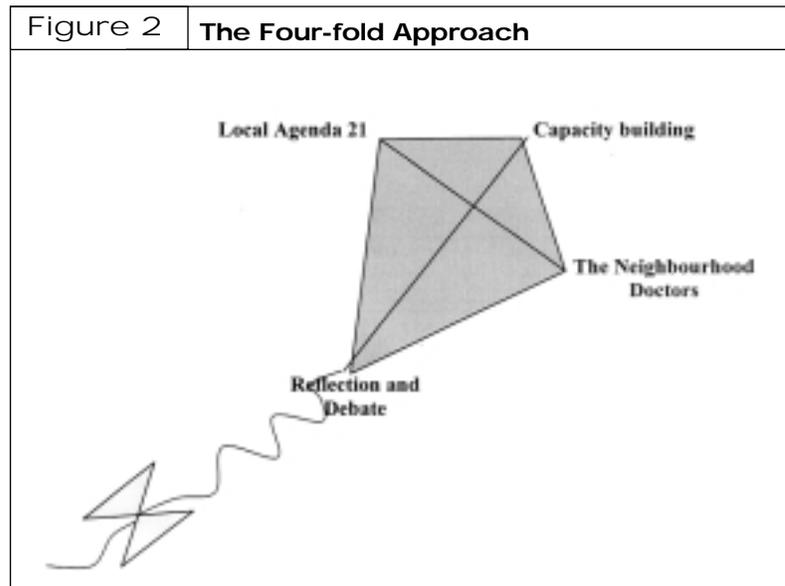
These conclusions led to the formulation of a small-scale experimental project. From the very beginning it sought the incremental involvement of the relevant external actors, gradually widening its scope to embrace the formulation of a community based Local Agenda 21.

c. Setting Up the Project

The project was conceived as an effort to combine four different kinds of activities which were to be closely linked and mutually supportive:

- Setting up a small-scale office in the intervention area called the "neighbourhood doctors" where technical assistance would be provided both for settlement improvement and for individual home improvement. The office would also manage a very modest community development fund.
- Developing a Local Agenda 21 from the bottom up.
- Training young Peruvian professionals (architects and engineers) to work with people in a different way.
- Reflection and debate: action research investigating the work as it developed and drawing conclusions from the results that would help support similar initiatives elsewhere and help generate discussion both with other groups striving for similar approaches and with policy makers and the donor community.

As a symbol of this four-fold approach, the figure of a kite was chosen, one of the toys that the kids in Pampas make themselves out of old plastic bags and bamboo. To get the project going, it was necessary to work simultaneously on all four components, as none could function without the others. The sections below describe the activities of each of these components and the results.



III. THE NEIGHBOURHOOD DOCTORS

a. Methodology and Principles

THE PROJECT BEGAN in eight settlements and invaded green areas where the inhabitants still did not have legal land title. The plan was conceived on a long-term basis, taking account of the inhabitants' existing initiatives, needs and aspirations. The short-term objective was to assure land title as the basis for enabling future neighbourhood improvement.

The basic principle of the project was to work as much as possible with the resources available within the communities, adding technical assistance as a tool and the very limited financial resources of the community development fund as a catalyst.

The first step was to improve the existing urban development plans for each settlement and to convert them into one integrated plan for all the settlements, reserving space for the inhabitants' future plans and aspirations. In order to do this, neighbourhood representatives from different community based organizations – including neighbourhood leaders, women participating in the communal kitchens, the “glass of milk” committees and the health promoter programmes, and young people, plus anyone else who was interested – were invited to a workshop in one of the communal kitchens. Instead of talking, use was made of drawings prepared by the people.

Although each workshop's way of working was slightly different, as they were adapted to the particular circumstances and people present, there were several common elements. First, people were asked to draw their childhood environment. Then, they were asked to draw their current situation, and their vision and aspirations for the future. The drawings were pasted onto the wall, making a small exhibition, and each participant gave an explanation of her or his drawing. Subsequently, all individual elements were brought together in neighbourhood plans developed by small groups. Each group developed two plans. The first showed the current situation, with the good and the bad sites marked, and the strengths

and weaknesses, problems and opportunities in the neighbourhood. The second showed a possible future for the neighbourhood, strengthening the positive points and possible solutions for the problems encountered. Wherever useful, a "guided tour" was organized, where the inhabitants prepared a walk through the neighbourhood, familiarizing the technical team with it and explaining in the field what previously had been drawn.

Drawing instead of talking has several advantages:

- It can avoid long (and often politically oriented) monologues.
- When drawing, people start to reflect on their situation, not only with their head but also with their heart. The drawings reflect a wider and richer perspective on what they want and what they dream of than spoken statements on what should be improved. Working differently also has a kind of "surprise" element which encourages people to think beyond the much used phrases about what they need.
- Allowing everybody – including young people and even children – to explain their drawing helps to give more equal weight to the opinions of each participant. People who usually do not talk in meetings – especially women and young people – have a form of expressing their thoughts. Of equal importance is the fact that participants had an amazing capacity to listen attentively to the different, short explanations. All opinions were heard.
- Starting from the individual perspective and then working towards a shared perspective enables people to first express their personal (sometimes pressing) concerns. Once these personal concerns had been expressed and taken into account, it was easier for participants to work towards a common proposal.
- Working together on a joint plan for the neighbourhood gave rise to many discussions on possible solutions to common problems.

The workshops produced two outcomes that neither the participants nor the professionals had expected. The first was the similarity in participants' dreams for the future. Discussions usually reveal disagreements but the drawings revealed the agreements. The "shared vision of the future" was much closer than anyone had thought. The most important elements of this vision were a far greener and cleaner environment. Both for the technical team and for the participants, it was a surprise to see how much emphasis was placed on the importance of greening the neighbourhood, even in those areas where people still lacked all basic services such as piped water to the house and electricity. When asked individually, people obviously put priority on water and sewerage as the most urgent needs but even in the youngest settlements, the importance of a green, clean and therefore healthy environment was repeatedly emphasized. This made clear that the binding element of the Agenda 21 that was to be developed should be the greening and cleaning of the area.

The second surprise outcome was the discovery of the inter-linkages between various problems, such as the consequences of waste being collected in one settlement but being dumped in a neighbouring settlement, or of the public space being covered with construction waste.

After this first set of workshops two activities were started:

- In many neighbourhoods, the inhabitants began to clean up the garbage dumps and to level out and prepare areas identified for parks or other services, without any outside assistance.
- The project team started to prepare an integral environmental plan for a set of settlements. This plan was based on the outcomes of the workshops and on the identified need for an ecological infrastructure. The

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plans can be characterized as “planning for the future” and aim at incremental improvement. They include the following basic elements for settlement development:

- individual plots and blocks;
- reserving areas for public spaces such as green areas and space for education and health services;
- road infrastructure and, where the characteristics of the area (steep hills) make it necessary, public staircases. Special attention was paid to the connection between the different settlements, something which had not always been noted in existing settlement plans;
- an emphasis on “strong elements” such as the special view, an element strengthened by introducing a look out.

The plans developed by the technical team were first discussed in meetings with neighbourhood leaders and it was here that most of the negotiations took place. Introducing roads, staircases and inter-settlement connections meant that each neighbourhood had to sacrifice some of their area for the benefit of all, and these kinds of issues had to be discussed with neighbourhood leaders first. Once the changes and agreements proposed by the neighbourhood leaders had been processed, plans were presented at neighbourhood meetings and once the changes were accepted by the neighbourhood as a whole, the definite plans were designed. The neighbourhood leaders then presented the plans to the land-titling agency COFOPRI.

b. Pilot Projects and the Community Development Fund

Once the tenure issues had been resolved (July 1999), the next step in the improvement process could be made, namely, the implementation of small pilot projects such as a park, a community hall and the first staircase in the settlement. The implementation of these pilot projects follows a similar philosophy to that developed in the southern Peruvian city of Ilo.⁽¹³⁾ Once the neighbourhood has developed a project proposal and generated some funds, the municipality assists with machinery, skilled labour and some materials. The neighbourhood provides the unskilled labour, and skilled labour from the construction workers living there. Most importantly, the community decides on the priorities for neighbourhood improvement and makes itself responsible for implementation and maintenance. Decisions are generally made in the general assembly of the settlement, which then forms a special committee to look after all the details. Boxes 1 and 2 describe initiatives in two different settlements.

In the coming months, the neighbourhood doctors will take on several other pilot projects in other settlements. The way of working in a settlement depends on the internal dynamics and the team has to constantly adapt. For instance, the process in Los Pinos described in Box 1 only required the neighbourhood doctors to be there when called upon, but the process in 20 de Mayo described in Box 2 required far more conflict-solving skills. In other settlements, there will be other issues. One of the limitations already identified is that a complete team of neighbourhood doctors should include a lawyer to help solve legal conflicts surrounding property rights.

Neighbourhood doctors also take on individual requests to design houses and home improvements. Agreement is reached with the state fund that provides credits in the form of building materials (Banco de Materiales) that houses can be designed according to the wishes of the

13. Balvín Díaz, D., J.L. Lopez Follegatti and M.A. Hordijk (1996), “Innovative urban management in Ilo, Peru” in *Environment and Urbanization* Vol.8, No.1, pages 21-34.

Box 1	The Local Communal and Public Space in Los Pinos
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The neighbourhood of Los Pinos originally had a brick building for community meetings which also housed a community managed day-care centre and a small room for religious services; there were difficulties in paying the communal centre's electricity and water bills. To the front of the building was a concrete playground and a parcel of waste land used by the neighbouring settlements to dump their waste. In a general assembly, the community decided on a clear set of priorities to improve the existing services and to convert the dump into a park.

As a first step, the area was to be cleared, then a small gallery (or stand) erected around the playground and a very small chapel built to house the statue of the Virgin, who protects the settlement. In a next step, an extension of the community hall and a park were to be designed simultaneously. A more long-term plan included the conversion of the small chapel into an altar in a real church. All efforts were considered as step by step improvements. The municipality provided materials to construct the gallery and the small chapel. The neighbourhood doctors were called upon to provide construction plans for the chapel and the gallery and to develop the proposal for the community hall and the park. The neighbourhood appointed a committee that included two construction workers, four women and some youngsters. While the committee worked on Saturday afternoons to design the proposal, the neighbourhood as a whole gathered on Sundays to clear the area and start constructing the gallery. In a first design, the committee indicated that the future community hall should house the following:

- a community day care centre;
- two rooms for small workshops, one housing the several sewing machines in the neighbourhood which cannot be used because of a lack of space, the other for another workshop. Both rooms should also be used for training, for instance, women with special skills in sewing, knitting, making jewellery, etc. could train other women;
- a communal kitchen and a bakery. The communal kitchen should provide cheap meals and the bakery cheaper bread;
- a community hall that could also be used as a cinema;
- an open air barbecue for the many fund-raising barbecues that are held in the settlement;
- a playground enclosed by a fence.

With its galleries, new goalposts, enclosing fence and barbecue, the hall and surrounding area could be rented to other settlements for their activities. The playground could be rented out at night as a parking lot to protect the neighbours' cars and moto-rikshas. All functions are thought of as having some income-generating component that could also create some employment and which would allow mothers to have more time available for income-generating activities. Some of the income generated should be used to pay the water and electricity bills.

The most important features of the design are that each of the rooms should be able to perform different functions and that the design should allow for the "self-help building" concept which involves room by room construction.

The committee organized the project – including all necessary meetings, fund-raising activities and contacts with external agents who are meant to help with materials, machinery and "food for work" assistance. Each committee member contributed five soles (US\$ 1.80) to an investment fund for fund-raising activities. The first communal barbecue held raised the equivalent of US\$ 30.

inhabitants and the plot characteristics, as long as they remain within the budget lines. This individual help cannot be provided free of charge but, thanks to private funds from Europe, it can be offered at a low price. In the longer run, the office of the neighbourhood doctors aims to work with completely transparent budgeting whereby the inhabitants can see that the funds they generate through their activities are used to ensure the continuity of the office.

III. A DREAM OF GREEN AND WATER

a. From Neighbourhood Planning to a Local Agenda 21

ONE OF THE most impressive features of the work was the long-term

Box 2	The Park in 20 de Mayo
<p>The settlement 20 de Mayo counts on a very special resource, namely a group of well-organized teenagers who call themselves the New Generation. The group manages a community library where children can do their homework under the supervision of the teenagers and they are always intent on bringing new activities to their library. Drawing upon existing resources, the work in 20 de Mayo started with the youth group and was backed by the educational committee of the neighbourhood association. In a first workshop, the teenagers expressed two strong desires: to expand their library to have room for workshops and to convert the long strip of wasteland that divides their neighbourhood in two into a park. During several workshops, the outlines for the park were developed to combine three functions: a quiet area in front of the library where “you can sit with a book and drink a juice”; a long lane with small seats and dimmed lights “where you can stroll at night”; and a sports place that combines playgrounds for adolescents with places where the small children can play”.</p> <p>After the first sketches were made, the teenagers were trained in simple land survey techniques and developed a topographical map of the area. This was used as a basis for building a model of the park which was presented first to the neighbourhood committee and thereafter to the general assembly. After approval, the neighbourhood doctors converted the teenagers’ designs into proper technical plans.</p> <p>The design phase of the project was very successful but problems arose during implementation. Both the educational committee and the youth group put in a tremendous amount of effort. They managed to get the funds to build a second room for the library and the neighbourhood doctors were asked only to supervise the construction. After an enthusiastic start, plans for the park got stuck in political fights: the secretary general of the settlement belongs to a different party to the members of the educational committee and he subverted the work in several assemblies. To try and resolve the tensions, a park committee was formed in which the educational committee, the youth group and the neighbourhood leader participated. With careful manoeuvring between conflicting interests, a clear agreement was reached. The mayor promised machinery and materials, and the neighbourhood doctors promised additional funding from the community fund and technical assistance for the park, if the community organized itself and generated the initial funds. The youth group designed tickets for a lottery and have organized a theatre play and music for a festive raffle where the mayor will draw the winners (food basket prizes). Its success will depend on the willingness of the neighbours to sell the tickets; if enough funds are raised, work can begin on building the park in October 1999.</p>	

vision of neighbourhood improvement expressed by the inhabitants – including the wish to green the environment. The professionals translated this into an “ecological infrastructure”, combining the individual elements of green into a chain of green woven through the area.

The largest area of “no-man’s land” identified was that under the electricity pylons which divides the area into two sectors. This area is also the biggest local garbage dump. In one of the first workshops held with the youth group in 20 de Mayo, this area was included as “the worst” and identified for greening in their plans for the future. They dreamt of a green area under the pylons, giving it both recreational and productive use, making it part of their living environment instead of the hostile desert that nobody dared to cross at night. This dream of greening the pylons became the binding element in the “shared vision of the future” for the whole area. For the technical team, it was clear that this required much more water than was available for the area and that using potable water would be irresponsible in Lima’s desert climate, drawing too heavily on limited fresh-water resources that future generations would need.

Fortunately, the area includes Lima’s first complex of stabilization ponds built in the early 1960s. These are meant to treat the domestic waste water from of all San Juan – and part of the water is used to irrigate a neighbouring recreational park and an eucalyptus forest. The ponds are not well-maintained and current discharge far exceeds the original design capacities. Both the park and agricultural land are irrigated with raw waste water. But in May 1998, the Ministry of the Presidency launched a

large-scale project to improve Lima's waste water treatment, financed by credit from the Japanese government. Phase one of this project includes the recuperation and improvement of the ponds in San Juan. If implementation takes place, from the year 2000 treated waste water will be available for irrigating green areas in the district. "Turning the pylons green" became the basis on which cooperation was sought with external actors.

b. The Different Actors Involved

i. The Internal Actors

The internal actors include the population as a whole and the organizations representing them. In the squatter settlements of Lima, the population is organized and represented by neighbourhood organizations and women's organizations. The formation of neighbourhood organizations is required by law. Governments and government related bodies (such as the electricity and water companies) only deal with elected neighbourhood leaders. Settlements have a neighbourhood committee (*junta vecinal*) with three to 12 neighbourhood leaders (male and female) and a general assembly where the population discusses and decides. Generally speaking, each plot has one vote in the general assembly. Women's organizations include the communal kitchens, the *vaso de leche* ("glass of milk" committees), mothers' clubs and committees of health promoters. Other organizations such as youth clubs, sports clubs, religious and cultural organizations and so on may also exist.⁽¹⁴⁾

When working in a neighbourhood, it becomes clear which of these organizations has the strongest mobilizing force – and this differs between neighbourhoods. Working at the community level always involves careful manoeuvring between vested leaders and up-and-coming new actors. As stated in Proposition 4, a neighbourhood is not an harmonious community and neighbourhood leaders do not necessarily represent the neighbourhood's interests. But bypassing those leaders known to be corrupt or unrepresentative can lead to serious complications in the long run. So one has to work with the leaders – corrupt or not, subversive, as in 20 de Mayo, or not – preferably working in parallel with the women's organizations or the committees formed for the implementation of the pilot projects.

The strongest weapon is the tradition of neighbourhood democracy and social control; the more the neighbourhood as a whole is involved, the better the chances of success. To enable the inhabitants to control the activities of their leaders, it is important to ensure a varied and continual stream of information to all inhabitants, thus allowing them to exercise "social control". As long as the project team provides adequate information to all, most of the problem-solving can be handled by the inhabitants themselves.

ii. The External Actors

Some of the external actors had already been approached by the neighbourhood doctors when the project started, namely, the district municipality of San Juan de Miraflores, the land-titling agency COFOPRI and the NGO IPES. Others were contacted after the first outlines of a community Local Agenda 21 had been developed, including the water company SEDAPAL, the waste water treatment programme PROMAR, the electricity company Luz del Sur and the Ministry of Transport, Communication, Construction and Housing. On their side, the neighbourhood

14. There exist many other forms of organization as well, especially thematic organizations (for example, street vendors, small-scale enterprises, carpenters, etc.), political organizations, trade unions, etc. These organizations do not have a neighbourhood focus and therefore were not relevant for this project.

committees contacted several national government entities for support for the implementation of the pilot projects, namely, the army, the food for work programme PRONAA and the development fund FONCODES. This made the range of external actors involved in the process quite diverse and it included three levels of government:

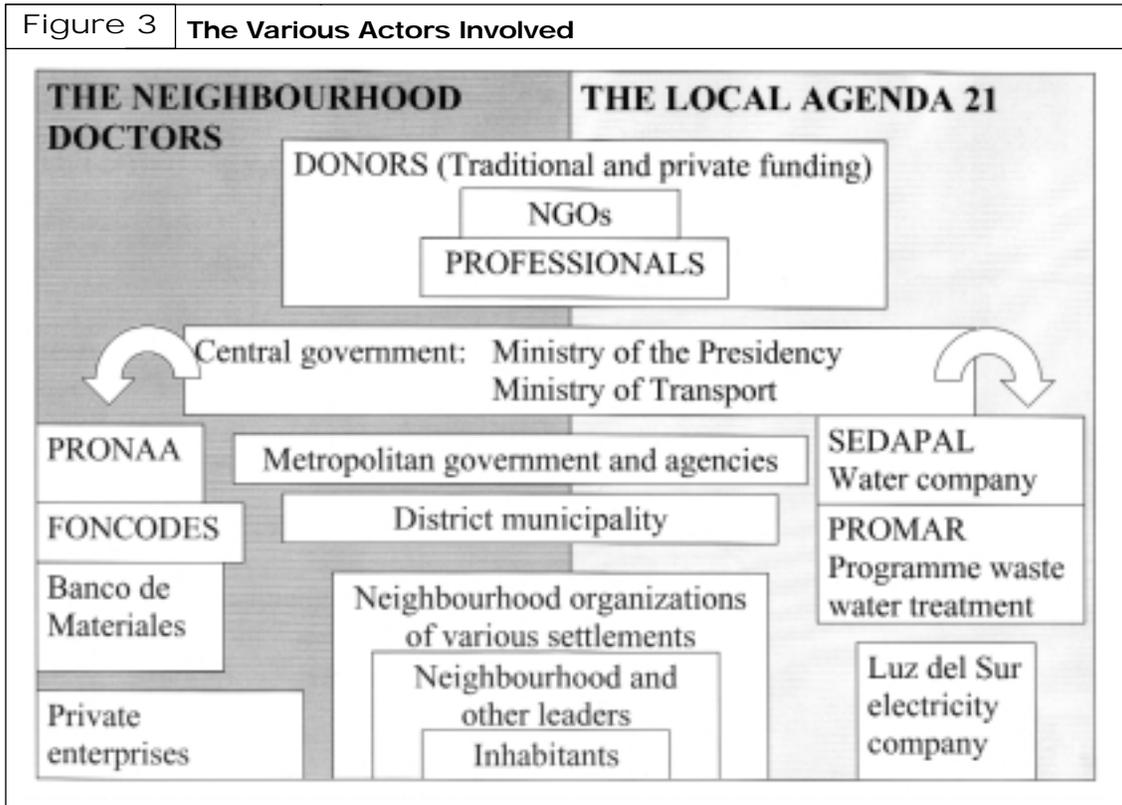
- **National government.** The Ministry of Transport and the Ministry of the Presidency, the army, the food for work programme PRONAA, the development fund FONCODES, the Banco de Materiales and the waste water programme PROMAR fall directly under the national government. Although the water company SEDAPAL is being privatized, it is still a public enterprise with high central government involvement.
- **The municipality of Lima Metropolitana.** Although rather marginal in this project, it has a role since major land use decisions are made at the metropolitan level.
- **The district municipality of San Juan de Miraflores.** This is involved in both the pilot projects as well as in the development of the Local Agenda 21. Although developed bottom-up, ideally leadership of the Local Agenda 21 should be taken on by the municipal government.

The project further involves the private sector, including both the electricity company (Luz del Sur) and enterprises that are approached for donations of materials. Finally, there is an important link with professionals, the NGOs and the donor agencies. The project is unusual in that most of the international funding comes from private initiatives in Europe – although some funding does come from more traditional donors such as the Dutch embassy and the NGO Novib. When the settlements organize their lotteries and other fund-raising initiatives, these are simultaneously organized in Europe to supplement the money raised in the neighbourhoods. An overview of the actors involved is given in Figure 3 and the roles of the major actors are discussed in more detail below.

The district municipality. In legal terms, municipalities play an important role in urban development in Peru. Municipalities that use the space allowed by the legal framework could be leaders in formulating and implementing a Local Agenda 21.¹⁵ Unfortunately, most Peruvian local governments don't; they lack the vision and the financial and human capacity to do so. The district municipality of San Juan de Miraflores is no exception and, furthermore, over the last two years, it has concentrated its efforts on relocating street vendors and paving the main roads. There is a clear rationale behind this. Relocating street vendors is the fashion in Lima and is happening in many districts, and investments in improving roads are facilitated by the national government which has made it a priority. Municipalities have a very small share of the national budget (around 4 per cent over the last decade) to spend according to their own priorities. On average, between 60 and 80 per cent of this small budget goes to paying salaries. National government created an additional funding mechanism for municipal investments. For mayors and municipal staff, it is most practical to spend this budget on road improvements because these are easy to implement; the necessary skills are available at the municipality, the army provides help and the results lead to many more votes. Pampas has benefited from these programmes, since more than eight kilometres of interconnecting roads have been paved over the last two years. But there was no time or money for other priorities – and even less for developing a coherent urban development plan.

The project always meant to interest local government in the development proposals of Pampas. But the municipality's inefficiency made this

15. See Miranda, Liliانا and Michaela Hordijk (1998), "Let us build cities for life: the national campaign for Local Agenda 21 in Peru", *Environment and Urbanization* Vol.10, No.2, pages 69-102.



a time-consuming business. Making use of the election campaigns which started in May 1998, the mayor was finally reached and expressed an interest. This led to the signing of a covenant in which the municipality commits itself to providing materials and heavy machinery to implement some elements of the integrated development plan as "pilot projects". It also commits itself to developing the outlines of an Agenda 21 for the area of Pampas de San Juan although the concept of a Local Agenda 21 was unknown to the municipality. They saw no problem in labelling their efforts "working for a Local Agenda 21" if this made it easier to get outside assistance. In the same covenant, the technical team of the project commits itself to training municipal officers in the most important elements and strategies of formulating a Local Agenda 21.

Interestingly enough, once the covenant was signed, real interest grew within the municipality, especially with regard to how efforts could be linked, and the project is now considered "an actor" in Pampas. The mayor informs the team on actions he has undertaken which might have an effect on the project area and the message to the population has been synchronized. It has been made very clear from both the project side and the mayor that the initiative and the first fund-raising activities came from the population. The mayor is supporting the population's ideas for their Local Agenda 21 and one of the key questions is whether the implementation of the Agenda, which still has a long way to go, will be realized within his governing period.

COFOPRI. The Commission on the Formalization of Informal Land Property is a national government entity created in March 1996 to legalize informal property in urban areas, starting in Lima. It has a far-reach-

ing mandate enabling it to solve property conflicts and is currently implementing a large-scale programme formalizing property in the newest settlements (founded before 31st October, 1996). COFOPRI started to work in San Juan de Miraflores in early 1998, at about the same time that the project started.

COFOPRI has a clear policy of only working with neighbourhood leaders. These have to present all their documents to COFOPRI, including the urban development plans as designed by the professionals they contracted. Given the pressure on it to deliver and its limited staff capacity, COFOPRI is forced to simply legalize these badly designed plans. Only in the worst cases – when people invade very disaster prone areas, for instance – does COFOPRI take on the remodelling or relocation of a settlement. It has shown a clear interest in supporting the project because it has eased their work in the zone. It also has a long-term interest as, in the long run, COFOPRI is meant to coordinate public and private investments in the zones where land titles are issued; it considered the project as a possible “pilot project” for this. Although cooperation with COFOPRI turned out to be successful – the land titles were issued in 1999, respecting the plans developed with the population – coordination was hindered by the fact that, officially, COFOPRI cannot work with agents other than neighbourhood leaders, hence, there is no formal working covenant with COFOPRI. As long as the staff with whom the informal commitment was made remain in office, the prospects for future cooperation are encouraging. It is a weakness, however, since this depends on committed individuals.

The NGO IPES and the Ministry of the President. During the first phase of the project, a Peruvian NGO (IPES) undertook a participatory diagnosis on the need for improved basic physical and social infrastructure. This led to profiles and projects being implemented by the Ministry of the Presidency within the framework of a poverty alleviation programme. Technical staff from IPES participated in several of the Pampas project workshops and members of the project team took part in IPES workshops. The results of the Pampas project are included in the profiles presented at the Ministry of the Presidency. For the first time in this programme, the introduction of staircases in inaccessible areas was proposed as a result of the workshops in Pampas. So far, the ministry had only considered staircases in rural areas. Elements from the IPES diagnostic were included in the integral plan for Pampas, including the need for schools (especially kindergartens and creches) and health centres. IPES also provided the institutional framework required by the Dutch Embassy to contribute funds to the project.

The water company SEDAPAL and the waste water treatment programme PROMAR. Both these companies are of key importance to the implementation of the Local Agenda 21 and both received its first outline with enthusiasm. The waste water treatment programme of the Ministry of the Presidency committed itself to reserve waste water for the project while strongly emphasizing that the proposed infrastructure that would be needed would serve a wider area than that foreseen in the project. This will require further coordination in the future, especially for monitoring the improvements reached in the stabilization ponds once PROMAR finalizes its programme. The water company Sedapal, who will operate the system once the PROMAR project is finished, immediately reacted positively to the proposals:

“Fifty litres a second are reserved for the project, we will not charge

them. But send us a letter on the project. We need that to convince the Japanese consultants implementing the project PROMAR. They are not that easy on the subject and please elaborate the maintenance of the system in coordination with the municipality.”

The Ministry of Transport. This ministry has responsibility for the areas adjacent to the stabilization ponds and it has to give permission to install the infrastructure needed for the project. It too received the project with great enthusiasm and will not only provide the land for the necessary infrastructure but also committed itself to donating a million trees to be planted. The donation of the trees comes on the condition that the project ensures training in the maintenance of the green area, in coordination with technical staff from the tree nursery.

IV. CAPACITY-BUILDING

a. Changing Attitudes

ONE OF THE weaknesses identified during the elaboration of the project was the distance between the professionals and the population. This can be viewed as both a geographical and a mental distance. The population depends on the professionals to elaborate their plans but there are very few professionals willing to spend enough time in the squatter settlements in order to develop adequate plans. The mental distance is caused by the fact that many professionals present themselves as the people who know and they think the population is ignorant. Professionals impose their ideas and proposals on the population, and the latter, dazzled by very learned presentations, accept them. There are few professionals who understand that many inhabitants know – through life experience – more about what is possible and what is not in informal settlement planning than they do. Universities train “experts”, they do not train professionals willing to put their professional capacities at the service of the needs and ideas of poor people. A capacity-building effort should close that gap.

It is for this reason that the project included a capacity-building element. At the outset, a course was offered for undergraduates and graduates in architecture and urban planning. This course included some unusual fieldwork, whereby participants were brought to Pampas, lodged there, and the course was given in a small Catholic church there. For many students, this was a first confrontation with extreme poverty; after the course, most said that their first days were despairing: “What can I, with my sophisticated design education, offer these people?” but ended with satisfaction: “When listening and looking attentively at the realities of the site, in economic, social and physical terms, even such an environment can be beautified using simple design principles.”

This course can be seen as an attempt at awareness-raising; steering young people towards a different working attitude requires more time. However, the project worked as much as possible with young Peruvian professionals and the permanent team was formed of two recent graduates whose work included much “learning by doing”.

b. Bringing the Professionals Closer

To reduce the mental and geographical distance between professionals and the inhabitants, the office where all professional work was done was

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placed in the centre of Pampas. The more people found their own suggestions and solutions being incorporated into the plans, the more they dared work with the team. The fact that the office was close and easy accessible – a simple room rented on the third floor of a hostel they all knew – brought them more often to the office to see how work was developing. As a result, the leaders at least – with whom contacts have been most intensive – consider the office and the professionals working there as “theirs”. The trust gained is gradually spreading through the population as a whole although there is still a lot of mistrust as a result of previous experiences. Most important for the population is that the team respect their working plans and be open to suggestions for finding solutions.

V. REFLECTION AND DEBATE

THE EXPERIENCE OF developing a Local Agenda 21 the other way round, starting with the population and their initiatives, led to a series of considerations on the dynamics of the Local Agenda 21 process. As noted earlier, the causes of many environmental problems are to be found in the transfer mechanisms underlying the current development pattern both at the very local scale of the home and the neighbourhood and on a larger scale. This proposal for a Local Agenda 21 addresses several of these transfer mechanisms at the most intimate scale – the home and the neighbourhood. As a result of the process, neighbours speak to one another about any waste or construction waste that has been inadequately dumped or community properties that have been damaged. Responsibility for keeping the parks green is assumed as a neighbourhood responsibility. Each household has to provide water for the park as long as there is no irrigation water. The Agenda is seeking to reuse the waste water created in the neighbourhoods. Although not yet possible, an additional activity might include using the organic waste in the neighbourhood to produce compost. The underlying assumption is that people are willing to take responsibility for their home and neighbourhood improvement – responsibility in the sense that the mechanisms by which environmental costs are transferred are addressed – on condition that it is clear that their efforts will lead to concrete results.

The experience to date shows that this assumption is generally correct but that in the field, there are many distorting factors which include mistrust, neighbourhood quarrels, conflicting interests and political influences. These problems can be overcome – basically by focusing on the common interests – but that requires a lot of time and patience. If the process of developing a Local Agenda 21 on this scale – one meant to also reach the low-income groups – is to be really participatory, it is a multi-year project.

Such a participatory process requires the combination of three different time scales:

- social time: that needed by the community to reach a lasting agreement;
- political time: the political lifecycle of local and national government; and
- project time: that which externally financed technical assistance has available.⁽¹⁶⁾

If a project is meant to serve the other partners – the inhabitants living within their social time cycle and the political actors determined by election interests – it should be flexible in adjusting its project time-planning.

16. Classification taken from Ms C. Carlos Grey, internal NGO meeting, February 1998.

Unfortunately, the possibilities for adapting the project time are highly dependent upon the willingness of the donor. All donors are driven by their own internal agendas which tend to focus on the date "the money has to be spent". The current strategies of international cooperation are generally counter-productive. There is an ever-growing tendency towards project finance instead of institutional finance and towards short-term results instead of long-term processes. The need for "accountability" makes budgets more and more rigid.

Local NGOs are seen as the institutions closest to the poor population and therefore important mediators for their needs and possible catalysts in a Local Agenda 21 process. In theory they are, but the short term, direct, result oriented projects on often tight budgets do not allow them to make time for defining project proposals in coordination with all actors involved. The current NGO strategy – presented as caricature – inevitably has to be, "first score the project, then find the target group". While preaching "consultation", "developing together a long-term vision" and "partnerships of actors", project finance forces NGOs to work the other way round. Project budgets stipulate that the results in the end are known at the beginning of the process – which contradicts the requirement of "consultation and agreements reached during a process". As a Peruvian mayor once stated: "When I practised consultation of the population, I had to learn to allow the population to change my plans. If a process of participation does not include changes in your plans, it is no real participation and people will lose their interest."¹⁷ Project finance so often makes it difficult to change plans.

There is a need for longer-term open ended finance; not open ended in the sense of uncontrollable or unaccountable but open ended in the sense that, at the beginning of the process of formulating an Agenda 21, funds should be reserved for some components of its implementation without defining the precise activities these funds will be spent on. Of course, donors could also be partners in the decision-making process on priorities for implementation. But, if the search for financial assistance starts only after the formulation of the Agenda 21, implementation will be hugely delayed as it takes so long for most donors to process funding requests. Delays mean that the working spirit generated in the community is lost. Also, if a community based development of an Agenda 21 is to be taken seriously, it must be possible for professionals to work with the community for a longer period of time. This needs to be reflected in budgets – yet donors so often object to supporting such staff time.

The neighbourhood doctors are not an NGO. The team is formed of independent professionals committed to the process. The office is meant to grow and subsist on a combination of resources generated in the community and of private solidarity funds raised in Europe. This should allow them to deliver good quality work at affordable prices. The development of the Local Agenda 21 and, especially, its implementation will require funding from traditional donors. This is why we seek to share the experiences and lessons learned not only in Peru and other Latin American cities but also in the donor community. If the "kite" of the Local Agenda 21 process (see Figure 2) is to lift off and gain height, the donor community should be called upon to become a partner in the process, not just in terms of financial resources but also in terms of being a committed partner in a challenging process. That would open the way for making the Local Agenda 21 a powerful instrument not only for governments but also for the people that are meant to contribute to its formulation and implementation.

17. Dr. Julio Díaz Palacios, ex-mayor of the city of Ilo, Peru.

