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THE MATERIAL BASE OF THE HABITAT

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CONTENTS

/Introduction

Introduction

Housing, infrastructure and services constitute the material aspects of the habitat. The availability of these elements in greater or lesser degree is one of the factors determining the quality of the habitat. The standpoint adopted in this study is that no less important than the physical endowment of housing, and perhaps even more so, are the processes and mechanisms through which these elements are produced and distributed. In line with this viewpoint, this document does not contain quantitative diagnoses of the existing situations in respect of the material base of the habitat in the region, but attempts to deal in depth with the aspects related to the generation of this base, distinguishing the various forms and instruments through which society and the different social groups composing it are organized for the production and distribution of the material elements of the habitat.

The production and distribution of housing, infrastructure and services implies complicated systems of relationships which appear in different forms according to the character and modality of intervention of the agents participating in the transformation of various types of inputs for the production destined to satisfy housing and service needs. These processes are carried out, in the case of housing, through more or less definite systems: the free land and housing market, the State-subsidized market and the informal system. In the case of infrastructure and services, the public sector is the primary producer and distributor, even when in some cases it grants concessions to the private sector for the supply of certain services, such as electricity or public transport. Moreover, the situation differs greatly between urban and rural areas.

/I. THE

I. THE LAND AND HOUSING MARKET

In the economic classification housing is defined as a durable consumer item. In free-enterprise economies its availability depends on the land and housing market, which regulates supply and demand through a price régime and in particular through private financing mechanisms in the free market and State subsidies in the protected market, which is frequently called the "social interest" market.

In the free land and housing market, housing is produced by private enterprise for customers whose saving capacity is sufficient to consign its construction to individual contractors or to acquire it with the help of private finance, generally at a high cost. This form of production takes place through the joint action of groups of promotional, building and financial enterprises which offer their product for sale on deferred terms with the building itself as security.

The characteristics of housing supply vary according to the solvency of different social groups. The differences are such that they constitute different types of demand, whose principal interconnexion lies in the unequal competition for the inputs of land and construction. For the sector which has no permanent income or saving power the supply consists of slum dwellings, subnormal lodging resulting from the subdivision of derelict dwellings and buildings which do not fulfil even the minimum standards of quality. For the groups with a steady income but limited saving power there is a market subsidized by the public sector, but this satisfies only a fraction of the potential demand in view of the growing discrepancy between the costs of land and construction and the resources for housing available to a large sector of the population. For the high-income groups there is an abundant supply supported by private financial mechanisms which benefit to some extent from the subsidies for the middle-income groups.

The concentration of a large part of the supply in the highest-income groups represents the rationale of financial capital which is acquiring a growing influence on the structuring of urban growth through direct investments and through support for new patterns of consumption. This is reflected in the increase in the scale of housing projects directed to the highest-

/income strata.

income strata. This circumstance directly affects the availability of urban land, the continually rising value of which comes to depend less on its monopolistic concentration in the hands of the traditional landowners than on the joint action of promotional, building and financial enterprises which, as will be seen later, have developed very elaborate strategies to obtain the lease of urban land, a basic input in the production of housing, infrastructure and services.

Although the situation may vary from one country to another and even from one settlement to another, private sector construction represents approximately a third of the annual housing production, while the public sector has to finance directly or indirectly no more than 10% of this production. The remainder is absorbed by informal systems whose productive capacity is currently estimated at 60% of the total number of dwellings built in urban areas. In the rural areas practically all the dwellings are built by their users, directly or by means of mutual aid.

The Latin American governments have for several decades included housing among their political concerns. As far back as the 1930s some countries had already created financial mechanisms to help the middel-income sectors of the population to solve their housing problems. Even so it was only in the 1960s that a major housing policy got under way. In this period international co-operation introduced a form of aid unprecedented in any other region of the world; indeed, the creation of the Social Progress Trust Fund administered by the Inter-American Development Bank permitted the transference of an average of a thousand million dollars per year to the region during the past 18 years, about half of which was devoted to housing and the other half to sanitary works. As a result of the availability of external finance for this type of investment practically all the countries of the region set up housing agencies dedicated to the direct construction of houses or to financing the demand, the latter being carried out through the creation or strengthening of public mortgage bonds and support for private saving and loan organizations. Nonetheless the increases in production of housing units did not succeed in alleviating the housing crisis or, of course, in affecting the accumulated deficit. In general

/the increase

the increase in need was greater than that of supply, since the need could not be transformed into effective demand in view of the reduction in real income and the increase in the costs of building and land.

Housing production has remained very low during the last three decades in comparison with need. United Nations estimates on the evolution of the housing deficit indicated that in 1962 it represented 13 million units; in 1967, 22 million; and in 1970 between 27 and 30 million, the estimated deficit for 1985 being 50 million units. At the same time it has been estimated that to meet the needs of the natural growth of the population, leaving the accumulated deficit intact, it would be necessary to build ten units for every thousand persons, a figure which far exceeds the estimated annual production of "normal" housing and which would imply a substantial increase in the present building capacity.

Formerly housing policies tended to depend on external finance but more recently they have inclined to the formation of funds earmarked for housing programmes. A very common formula was the utilization of the reserves of pension and unemployment benefits for manual workers and employees. In this way great housing estates were built in various countries, but the limitations of effective demand caused a displacement of the supply towards groups with greater buyng power. In general the effects on housing were limited, but the use of these funds has given a great boost to the construction industry, which in the end turned out to be the chief beneficiary.

This situation is understandable, however, if it is borne in mind that the minimum condition for the aid programmes of the public sector in respect of housing is officially defined as steady employment and in practice as an average annual income of the order of 2,500 dollars. In these circumstances a large sector of the population is excluded from these programmes. For example, in one of the cases studied the fund financed from workers' pension reserves has provided housing for only 3% of its affiliates.

This sector, which has no permanent employment and lacks the saving capacity needed to take advantage of the public sector programmes, has access only to dilapidated and slum dwellings let at prices relatively higher than those paid by the higher-income groups for better houses.

/II. PRODUCTION

II. PRODUCTION AND IMPROVEMENT OF HOUSING IN SQUATTER SETTLEMENTS

The sectors marginated from the market have devised their own methods for meeting the existing situation and have created their own systems of housing production. This is the case with the inhabitants of squatter settlements whose housing needs are solved outside the conventional market and with little help from government subsidies. This has produced a new "model" of social action within the framework of the survival strategies of the lower-income groups.1/ In relation to the material base of the habitat the solution provided by the squatter settlement has very significant features which may be usefully summarized here. The aforesaid "model" functions as follows:

(a) The process generally begins with the de facto occupation of public or privately-owned land. In some cases third parties divide up land illegally and sell it in lots with the promise of installing services. In the more frequent case of take-overs, these are organized by associations of settlers who have demonstrated an extraordinary capacity for organization and action.

(b) On the lots thus "habilitated", the tenants begin a programme of "self-help construction" in which they make use of building debris, conventional materials bought in the market, their own labour and occasionally other labour supplied by various forms of mutual aid or by small contractors. This building technology consists in the gradual and progressive incorporation of diverse elements through a long period, during which the dwellings are in actual use practically from the start.

(c) The services also are progressively installed by the users themselves, either by direct appropriation of some elements as in the case of electric lighting, or sometimes by the action of the State.

(d) When the housing unit has reached a fairly advanced stage of construction it acquires an exchange value which prompts the formation of a parallel market. Those who sell uncompleted houses acquire in this way some capital which enables them to live through the initial period of a new

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1/ See a detailed study of this sibject in Human settlement in Latin America, (E/CEPAL/CONF.70/L.5).

/building programme.

building programme. The buyer of the dwelling puts in further savings and starts the process of gradual improvement. When the dwelling acquires a higher value towards the end of this process it enters the conventional housing market. In this way the squatter settlement has developed into a normal settlement.

From this point of view it can be said that this form of housing production and distribution has its own rationale and must be considered acceptable in view of the prevailing conditions.

The insertion of the dwelling produced by the popular sector in the housing stock of the community is not reflected in the national accounts. At all events, this form of silent contribution to the national product seems to have reached significant proportions, as can be seen from the number of dwellings built annually by the popular sector, its volume in some countries being estimated at 60% of the urban housing production.

An important factor in this process of insertion is the legalization of ownership of the dwellings produced by the system. As this system cannot be autonomous the capitalization of the goods and services produced and their financing is subject to the norms of the regular market. As long as the legal problem of entitlement remains unsolved it will be very difficult for the system to operate beyond a certain limit. Experience shows that when there is security of ownership, as in the case, for example, of the new towns of Peru, the rate of investment in progressive improvement increases. In contrast, insecurity of land ownership is a disincentive.

III. HOUSING PRODUCTION IN OTHER PROPERTY REGIMES

It should be noted that other systems of housing production and distribution have grown up in the region which differ from the conventional models, whether in the public or the popular sector. In Cuba housing is normally produced by the State. There has also developed a different form of employment of collective work by means of organizations which are known as "microbrigades". These are voluntary organizations of labourers and white-collar workers who join forces to engage in the direct building of houses which are not destined for their own use but which are distributed in the same way as all the others, that is, by planned assignment in terms of family needs and social criteria.

/The microbrigades

The microbrigades are formed in public offices, industrial enterprises and suburban committees. The normal work of their members is taken over by their workmates, whose additional effort is described as "plus work", so that the productivity of the institution does not suffer. The microbrigades entirely replace construction workers, even in the spheres of professional specialization. Although construction by this method normally takes longer than the conventional process, the final result is not very different from other construction work.

This system of housing production is certainly a novel way of applying social work to the satisfaction of immediate family needs in conditions of full employment. In this sense it has a different motivation in that it is not prompted by personal gain but by a concept of social solidarity.

IV. THE RURAL HABITAT

The material base of the habitat as described in this study acquires a very special meaning in the rural settlements. Whereas a house in the city, is physically and functionally separate from the place of work, in rural areas it generally forms an indivisible whole with the equipment of production, even in the poorest of peasant settlements. For the dispersed rural population, infrastructure and services are mere abstractions which take concrete form only within the dimensions of the comarca */ when transport or medical services are needed or when a distant market must be visited in order to buy or sell. This extreme attitude will only give way to an urban view of housing and services as the population progressively concentrates in rural towns and small cities. In these settlements contact with the outside world is more frequent and links with similar settlements are closer, even though communications are practically reduced to local roads along which the people have to travel on foot when there is no possibility of using trucks. Only the largest towns have omnibus services and in some places freight trains.

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*/ Comarca: area of territory comprising several settlements.

/Rural housing

Rural housing is produced in most cases by its own users, possibly with the help of neighbours and the co-operation of some local craftsman. The dwelling forms part of the productive unit, especially in the areas of subsistence farming. In the plantations and large farms, rancherios */ and camping sites they are improvised shelters without services which house the labourers who constitute the permanent labour force. The seasonal workers have to share the rudimentary arrangements of temporary shelters which are often so makeshift that the men are practically living in the open air. Only in the agroindustrial settlements is it possible to find permanent housing endowed occasionally with communal sanitary services. The possibilities of significant changes in the rural habitat depend fundamentally on alterations in the production system. For the peasant who lives on subsistence farming the only options are seasonal migration, to earn the means of acquiring what he does not produce, or permanent migration to the rural periphery or the city. His habitat, therefore, is the comarca and, seasonally, the plantation. Accordingly he is usually not settled in any fixed place.

In the areas where commercial agriculture has developed, the rural dwellers tend to concentrate in towns and small cities where they are contracted for seasonal work during the sugar or other harvest and the periods of sowing. In these cases the habitat begins to assume the features of the urban environment. Here the dwellings are in better condition and are generally built with the help of small contractors who contribute specialized labour in so far as the agricultural worker can save part of his wages. Generally some opportunities arise of occasional work in non-agricultural activities. In these towns services also begin to appear, especially educational and health services, the first manifestations of government aid.

For the subsistence farmer who has a small farm, the occasional labourer, the worker on a traditional estate, the seasonal day-labourer who lives in towns and small cities, and the small agricultural landowner, the habitat has different connotations which gradually discard their rural character to approximate more closely to the urban. In this change the material base will be greatly modified, thus making it difficult to

*/ Rancherío: collection of huts.

/refer to

refer to the rural habitat always in the same terms. Indeed, the only common feature is the notable inferiority of the housing, infrastructure and services to that of the urban environment.

V. INFRASTRUCTURE AND SERVICES

In housing production and distribution of the land and housing market plays a dominant role in the relationship between the factors and inputs of production. The public sector intervenes in the production systems basically to subsidize the demand and thereby to bring the market within the reach of sectors of the population which otherwise would have no access to the supply. It has already been observed that the capacity of the State is limited and that its action is mainly directed to the stimulation of the construction industry, as evidenced by the increase in official housing programmes in periods of economic recession. Similarly the lack of an adequate supply for those sectors which do not qualify for the subsidized market has been seen to give rise to adaptive solutions such as the squatter settlement, in which the take-over of land and self-help construction are the means used by certain social groups which devise their own systems of housing production.

The production and distribution of infrastructure and services constitutes another system which is administered by the State and which has its typical features. In general, these systems function in the following way:

(a) In every settlement there are specific needs of infrastructure and services which become apparent according to the level of the family units;

(b) These needs are interpreted by the public sector through their own methods of identification, which are generally based on considerations of political prestige or on central government programmes oriented by general policies. Accordingly, the specific needs come to form part of composite programmes in which the nature, quality and volume of the services to be provided do not necessarily have any relation to the original needs. Thus, for example, the paving of roads may have less importance for those who have no motorized vehicles than the building of schools.

/(c) The

(c) The construction of infrastructure and services is carried out in relation to the resources available for each of the public sector programmes (sanitary works, highways, construction of public buildings). Socially, the location of these investments is based on decisions of the local authorities whose criterion is usually influenced by the interest of the social groups with greater pressure power.

(d) The technologies applied to these works are conventional and their products are generally beyond the purchasing power of the larger part of the population. It is typical, for example, that the conventional installations for drinking water are only partially utilized, despite the existence of public networks, owing to the fact that the poorest sectors cannot afford to buy the sanitary equipment of bathroom and kitchen.

(e) The services thus provided are distributed by means of mechanisms which in practice operate through the application of charges by public bodies, which are generally national or municipal enterprises. In some cases private enterprises are also involved, operating through concessions and applying criteria of profitability, as in the case of electricity or collective transport. In these cases the supply of services gives rise to monopolies which fix the prices through negotiation with the local authorities.

In the functioning of these systems of production and distribution of infrastructure and services certain deficiencies are apparent.

First, the identification of the service needs of the population seems highly inadequate in that it is not carried out by the community itself but decided by the public sector in a largely arbitrary fashion. The lack of community participation in local government creates a gap which is a great obstacle to a more effective identification. This situation might be partially corrected, at least, with the help of public surveys or opinion polls.

Second, the definition of the priorities, nature and quality of the services is frequently unrelated to the preferences of the population which has to receive, and often pay for, services which are less urgent or which are not needed.

/Third, the

Third, the lack of flexibility in the techniques applied to the construction of installations and infrastructure frequently raises the costs and overlooks the possibility of using local materials and skills, often producing structures which are ecologically and culturally unsuitable for the local environment. The feelings of dissatisfaction which some public works have aroused in the population have been cited in many studies as an explanation of the indifference with which they are received by the community and the carelessness with which they are treated.

Finally, the location of the installations and services is regressive in most cases. It is evident that those which are of the best quality and best preserved are always found in the most prosperous residential areas.

As a result of the defective functioning of the systems of service production and distribution there is a manifest shortage of these throughout the region, including the metropolitan centres. In the largest cities, for example, collective transport imposes a heavy burden on the inhabitants' use of time. In some, for instance, it has been shown that workers living in the outskirts have to spend up to four hours a day in travelling between their place of work and their home. Sanitary services are also insufficient, there being many large cities where half the population lacks a direct water supply and sewage disposal service. In consequence infant mortality in some cities of the region is still as high as that of the poorest countries of the world. The medical care provided, measured by the number of beds per thousand inhabitants, amounts on average to barely a fifth of the average for the United States.

This situation is explained in part by the extraordinarily rapid growth of the population. It has been shown in practice that when the urban growth rate exceeds 6% it causes serious deficits in the services, which increase in geometrical proportion to the speed of growth. In these circumstances it is essential to have larger allocations of capital available, together with more suitable technologies and more efficient systems of production and distribution.

But this alone is not sufficient. In the last analysis, the quality of the habitat is a collective responsibility, since without community participation it is unlikely that the public sector alone can bring about

/improvements in

improvements in the material base of the habitat. Perhaps the most important function of the local authorities is to mobilize the interest and participation of the population as a whole in a task which ought not to be the sole responsibility of the State.

VI. THE QUESTION OF URBAN LAND

Urban land, as an input in the production of housing, infrastructure and services and as an essential raw material in the occupation, organization and preparation of human settlements, is a factor of fundamental importance in the establishment of the material base of the habitat. It is the primary element in human settlements. Nevertheless, within the private property régimes which predominate in practically all the countries of the region, urban land is the chief obstacle to the development of the habitat. The price of land as a component of the cost of housing is in inverse proportion to its final value, coming to represent in some cases more than 50% of this value. The prices of land are in fact as high in the Latin American metropolitan centres as in the largest cities in the world. In these circumstances the cost of urban land is frequently an insurmountable obstacle to the construction of public works. The manner in which the land is used as a result of its rising cost has become an additional factor in the destruction of the natural environment. Indeed, the natural reserves surrounding the cities have become the prime object of speculative investment, while the densities of occupation in some urban sectors have increased to such an extent that they are a detriment to the habitat and a threat to human health.

There is no doubt that this situation derives from the existence of monopolistic markets in urban land and speculators who keep important areas out of the market to await their appreciation. There are many reasons for this. First, the unearned increment produced by public investments and changes in the use of the land is appropriated by private owners. Second, the authority has not sufficient power or capacity to exercise effective control over the use of the land. Third, the lack of adequate legislation

/to guarantee

to guarantee the investment of moderate and small savings in the stock market and productive enterprises has turned land speculation into a form of maintaining the value of savings, which would otherwise be liable to devaluation through the domestic inflation affecting many countries in the region. Fourth, the taxation system is weak as an instrument for regulating the values of real estate. Last and perhaps most important, the growing intervention of finance capital in the land and housing market has created new and more complex forms of accumulation of land rental which are transmitted to the market as a whole. In general conditions which favour the concentration of wealth and the predominance of finance capital, it is possible that the real-estate business will succeed in capturing the greater part of the external economies of urban agglomeration, passing on in their turn social costs such as the increase in land prices, traffic congestion and the social segregation which normally accompany real-estate activities.

There is a great variety of legislative measures and forms of official intervention to exert control over the land and housing market. The developed countries, including the capitalist ones, have devised a series of measures to check speculation in this field. The most important of these relate to the recovery of the unearned increment derived from public investment, the regulation of urban rentals through taxation, the expropriation of land in the public interest, the acquisition of reserves of publicly-owned land as a means of controlling the market, the usufruct and transference of the ownership of public land, the strict control of the use of land, the expropriation of the right to transform rural land into urban and the increasing taxation of vacant lots in order to compel their entry into the market. These measures are only an illustration of what might be applied. Suitable instruments might be devised to meet each particular case. The harmful social effects of land speculation have been widely recognized in the region, both in numerous studies and in international agreements. At the recent Latin American and Caribbean Meeting on Human Settlements (Mexico, November 1978) convoked by the United Nations Foundation for Habitat and Human Settlements, top priority was given to the need for adopting energetic measures on the question of urban land. In one of the documents prepared for the Vancouver Conference

(Land for

(Land for Human Settlements), the United Nations has emphasized that the concentration of land ownership in the hands of a small group prevents the majority from enjoying the right to use it. This is without doubt the most fundamental of rights. It is paradoxical that the tax-payers themselves, through their participation in the cost of the public works which give value to the land, contribute to their own exclusion from this market.

It is difficult, however, to understand the reasons for the virtual ineffectiveness of the few measures adopted, owing to the inadequate knowledge of the real-estate market, which is far from homogenous and which is profoundly influenced by the intervention of modern finance capital. Indeed, the speculative activities of the traditional urban landowner can only explain the problem in those cities where the building of high-standard housing complexes has not yet developed on a large scale. It may be that the ineffectiveness of the measures adopted is due in part to the relationship established between the sale of the land and the vested interests associated with it on the one hand and the processes of capital accumulation and formation on the other.

There appears to be an important correlation between the internationalizing of finance capital and its effects on the prices of land. In Caracas between 1970 and 1975 the price of a square metre of built-up land rose by more than 300%, that is, a little more than three times the increase in the cost of living. It is estimated that 60% of this increase was due entirely to the growth in the prices of urban land, which became 17 times as high in the same period. In Santiago the unit value of land doubled in the last six months of 1978.

Indeed, the mechanisms through which the land and housing market functions seem to be connected in such a way that they generate a continuous artificial increase in the value of land. From the time when a parcel of land enters the urban market its price never ceases to rise, thereby increasing all the values resulting from the utilization of the ground. In times of inflation the value of the land in the long term is higher in practice than any immediate profit that might be obtained from it. This explains, inter alia, the existence of houses and properties left vacant for a long time when the demand for housing falls. Rent speculation in the

/decayed central

decayed central areas (slums), and in the outskirts where there are no services, lowers even further the standards of living of the lower-income groups.

This situation also has an effect on the whole organization of the settlement. It has been calculated that in five Latin American cities the reserves of building lots left vacant for speculative purposes represent a potential of occupation sufficient to meet new housing demands for several years. This leads to an excessive extension of the urban perimeter and puts an added burden on the costs of installation and maintenance of the networks of public services.

VII. TECHNOLOGY APPLIED TO HUMAN SETTLEMENTS

The technology of the human settlement is a specific field of interest to the United Nations, especially in its relation to the environment.2/ In Latin America CEPAL in co-operation with UNEP is engaged on a Programme of Technologies for the Human Settlement.

In the organization and preparation of the space in human settlements techniques elaborated in the developed countries are largely used, either adapted or in their original form. These techniques were designed for economic, ecological and cultural conditions very different from those predominating in the countries of the region. In general they correspond to the life styles of the societies taken as a model of development and are therefore accepted as natural by the national minorities, which identify themselves with their values. Despite the fact that these life styles are only accessible to a minority sector with the requisite means, they become part of the social outlook of the groups that are awaiting the opportunity of adopting the status patterns of consumption to which they aspire. The demand for household goods and services, domestic equipment and forms of recreation produces a type of habitat which is not the most socially adequate in economic, ecological and cultural terms.

2/ See a detailed account on the subject in Tecnología para el Asentamiento humano en América Latina, (E/CEPAL/CONF.70/L.9).

/In addition

In addition to this problem there is the further difficulty that modern technology takes little account of economic factors. Indeed, within the mechanisms of the monopolistic market, the application of less expensive techniques would only result in increased profits for the empresario. As these come basically from commercial transactions in urban land and the profits obtained from the differential costs of financing, there are no incentives for the investigation and development of appropriate technologies.

Only the State, which in practically all the countries is the chief customer of the construction industry, would be in a position to demand reductions in costs which would compel the introduction of new technologies. This is in fact a possibility that might have an appreciable effect on the region as a whole. Some pioneer experiments seem to confirm this.

The possibilities of technological innovation in the field of human settlements appear to be very great. The climatic conditions of most of the countries in the region have the advantage over those countries whose housing technologies are imitated. The larger part of the population lives in tropical or temperate zones without much rainfall or extremes of temperature. The buildings can be simpler and more open than their prototypes in Europe or North America. The more casual way of life, with more time spent in the open air, would result in a reduced demand for inside space.

The investigation and development of new building materials and new methods of constructions which reduce the use of heavy machinery and conventional energy would bring about a reduction in costs and a better integration with the natural environment. It has been shown, for example, that the manufacture of cement is highly oil-consuming in the countries which have no hydroelectric energy and that this material can be replaced by a series of natural products such as lime and volcanic ash through the the application of much simpler processes. Similarly, the use of wood and other light materials could offer an interesting alternative for building on sloping land without the need of levelling the ground. The use of roadwork machinery for the habilitation of urban land in places with an uneven terrain and heavy rainfall has given rise to unprecedented urban floods.

/The treatment

The treatment of sewage is a problem which increases with the size of the cities. When only small concentrations of population were involved the discharge of waste water into the water courses was not a major problem, since the mass of water had sufficient capacity for biodegradation. When the volume discharged into the streams increases in relation to the capacity for natural regeneration it causes serious contamination. This hitherto unsolved problem requires the application of new technologies of collection and treatment which are as yet unobtainable. The same applies to the elimination of solid waste.

Hence the investigation and development of suitable technologies seems to be a specific field of action which calls for preferential attention from the public sector and which would result in an immediate improvement of the habitat.