

UBA - TEXTE 90/99

ENVIRONMENT AND SPATIAL PLANNING

Summary Reports on
Research and Development Projects

UMWELTBUNDESAMT

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Preface

This publication summarizes the results of research and development projects which have been commissioned and supervised by the Environmental Planning section of the Federal Environmental Agency. The results of the research and development projects do not always reflect the opinions of the Agency.

It is not possible to discuss here the extent to which the research results have influenced the further development of regionally significant environmental planning. With the spectrum of presented topics the subject matters of environmental planning are outlined and elaborated.

Other tasks in this field which hitherto have had to remain untackled will be worked on in the future and will be presented in a continuation of this document. The publication should provide interested experts a picture of the Federal Environmental Agency's activities in this field. An environment-oriented regional policy is, typically, cross-section-oriented. Both compartment-related environmental aspects and other, cross-section-oriented special tasks, such as legal, economic and sociological aspects of environmental protection, have to be taken into account. This report intends to facilitate the necessary communication.

Those who would like to obtain more detailed information on a particular research and development project may wish to consult the original research report.

The Editors

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Introduction

Spatial planning with the aim of environmental protection takes place at the federal, Länder (Federal States) and municipal planning levels and serves to prepare political resolutions and to implement parliamentary decisions. The parties involved are, among others, citizens, property owners, investors, planners in administration, affected public institutions and the political decision-makers.

Regional plans and local development plans form an important foundation based on federal law for decision-making regarding sites for emission-causing plants, recreational facilities, landfills and thoroughfares, to name but a few examples.

Spatial planning comprises instruments of coordination and information. The most important task is the arrangement competing demands for use of an area, weighing out the public and private concerns. Environmental planning aims to incorporate fully environmental concerns into planning, to weigh them with respect to their importance and to include methodological considerations concerning existing and new instruments and procedures. Planning is based on the following typical phases which have to be adapted to each specific case.

Different Levels of Spatial Planning with Consideration to Environmental Factors



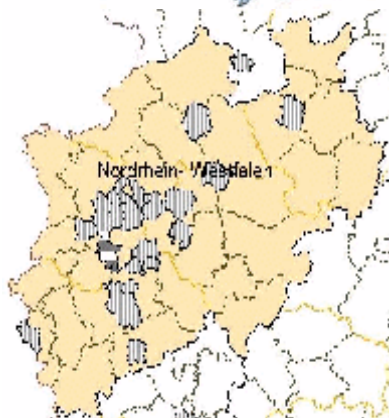
Name of plannings; scale
European Community; bi-national and multinational contracts

Kind of planning
Development of concepts and frameworks without liability; (financial) programs with effects to national planning; information exchange



Bundesraumordnungsprogramm; regional planning (at the level of federal state)
Schwerpunkte der Raumordnung (1985);
Raumordnungspolitische Orientierungsrahmen (1983)

1 : 100,000,000



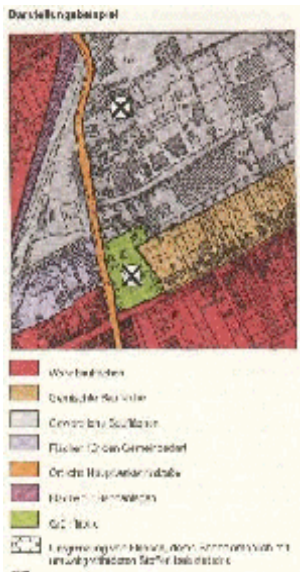
Landesentwicklungsplan; regional planning at the level of the *Länder*
Landesraumordnungsprogramm

1 : 500,000

1: 200,000

Regionalplan, regional planning at regional level (for parts of the *Länder*)
Gebietsentwicklungsplan, Regionales Raumordnungsprogramm, Regionaler Raumordnungsplan, Regionales

Entwicklungsprogramm



1 : 50,000

1 : 20,000

Flächennutzungsplan

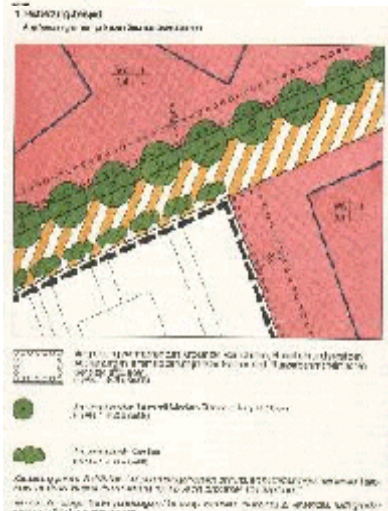
preparatory land-use plan (for the territory of a local authority)

1 : 20,000

1 : 10,000

1 : 5,000

Land-use Planning



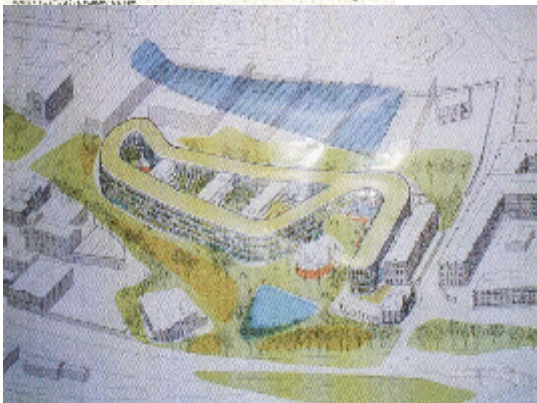
Bebauungsplan

legally binding land-use plan

1 : 2,000

1 : 1,000

Local development plan



Bauplan

construction plan

1 : 100

1 : 50

1 : 10

Sector Planning with Relevance to the Environment

At the different planning levels exist sectoral plannings. This plannings can be subdivided in planning with the aim of environmental protection, e.g.

- landscape plannings
- plannings for prevention of air pollution
- plannings for noise reduction
- forest framework planning
- waste disposal planning
- sewage disposal planning

and plans with the attending aim of environmental protection, e.g.

- transportation plannings
- development planning in rural areas
- energy supply plannings.

The different interests and aims of the sectoral plannings have to be integrated in the spatial plannings at the different levels above-mentioned.

Guidelines for Local Environmental Reporting.

Leitfaden "Kommunale Umweltberichte".

Hrsg.: Deutsches Institut für Urbanistik im Auftrag des Umweltbundesamtes.
Berlin, 1999. ISBN 3-88118-283-7.

The aims of the "Guidelines for Local Environmental Reporting" are, inter alia, to identify the environmental problems facing local authorities and ways in which urban planning can help to solve them, to analyse problems and solutions so that they can be used as a basis for political decisions. The guidelines which were compiled jointly by the Umweltbundesamt (Federal Environmental Agency) and the Deutsches Institut für Urbanistik - difu (German Institute for Urban Studies), are a completely revised, updated and expanded version. They provide local authorities with better guidelines and suggest methods they can use to take a critical look at the way they compile reports and enable them to develop further the specific concepts worked out for their particular area. It includes not only new knowledge gained from research but, more importantly, practical experience with writing reports on the environment, gained from the model project carried out in Regensburg, for example. Information gathered in the course of the lively exchange of experience with environmental protection amongst local authorities has also been included.

The categories in the revised version reflect the more advanced state of knowledge about the way environmental problems are inter-linked and the change in the way the local authorities see their role. The titles of the categories are:

- Soil protection
- Protection and guarding of ground water
- Sewage treatment and water protection
- Air quality control
- Energy and urban climate
- Nature and landscape conservation
- Waste management
- Noise abatement and noise reduction

This basic work has the following structural elements:

The division into stages to go through when addressing a problem, ranging from general description to special measures to be taken.

The catalogue system runs through all sections of the technical chapters. As a rule it consists of a catalogue of problems, a catalogue of data on the current situation, a catalogue of objectives and a catalogue of measures. These catalogues are in turn divided into categories so that the numerous and varied interrelated environmental problems can be allocated to the different departments within the local authorities (responsibilities).

The system of examples is also part of each technical chapter. It contains concrete references to exemplary scientific material or material compiled by local authorities.

The implementation guidelines contain recommendations for the problem section, the inventory and analysis section and for the objectives and measures section on the minimum standards which a concrete report on the environment by a local authority should set out to attain.

Local Agenda 21 - Comparison among European Countries.

Lokale Agenda 21 im europäischen Vergleich.

Bundesumweltministerium, Umweltbundesamt (Hrsg.), vorgelegt vom Internationalen Rat für Kommunale Umweltinitiativen und vom Deutschen Institut für Urbanistik, Bonn/Berlin, 1999.

Purpose of the Study

Judging the Local Agenda 21 work being done in municipalities in Germany in comparison with other European countries only on the basis of "numbers", that is, on how many local authorities are actually engaged in Local Agenda 21 planning processes, is not a satisfactory method for evaluation. For that reason, the present study aimed to describe Local Agenda 21 in local authorities in German, Great Britain, the Netherlands, Poland, Sweden, and Spain in terms of its role and function, how it is understood, and which differences and commonalities exist among these countries. The chapter on Germany was prepared by the German Institute of Urban Affairs (difu), the sections on the other European countries by the European Secretariat of the International Council for Local Environmental Initiatives (ICLEI).

Approach

The assumption underlying this study is that the understanding of Local Agenda 21 in a particular community develops from a certain starting situation and the impetuses it receives. This understanding is presented using the quality requirements each of the countries examined has defined for its Local Agenda 21. The study showed that the criteria used in each of the countries were suited for evaluating the understanding of Local Agenda 21.

Results of the Comparison

The comparison of the six countries illustrates that although the starting conditions for Local Agenda 21 differed from country to country, in many essential points they were in fact similar. Although true municipal self-government only exists in Germany and Sweden, in all six countries local authorities have responsibilities and powers in the area of urban planning, and elements of public participation are firmly set by law. The major impetuses from the national level given to Local Agenda 21 in the countries studied came from the environment and development organizations. An exception here is the Netherlands, where Local Agenda 21 is stipulated as an option in the implementation of the National Environmental Policy Plan at the local level. A clear trend was found to coordinate and link Local Agenda 21 processes at the regional level, which is most evident in the German *Länder*.

In all six countries, the understanding of Local Agenda 21 includes the rational use of natural resources, which is seen as ranging from the long-term security of quality of life to the closing of material cycles.

The essential feature of the Local Agenda 21 process in all six countries is the participation of the local public in its development and implementation. The notion of "participation", however, ranges from negotiations between the local council and influential local decision-makers (Poland) to the involvement of local residents in identifying the most important topics (particularly in Great Britain). In between, those extremes are more complex approaches, for example, a jointly implemented project (Sweden, Netherlands), the introduction of participatory urban planning process (Spain), or the integration of ecological, economic, social, and global considerations of municipal development planning by engaging actors from all of these areas (Germany).

This integration of these aspects is a further quality requirement for Local Agenda 21 in all of the countries studied, as is the long-term orientation of the Local Agenda 21 approach, especially as regards its goals. This is made difficult, however, by the short-term thinking from election to election. In Great Britain, the Local Agenda 21 work towards improving the quality of life can succeed only if it is carried out with long-term goals in mind.

One problem associated with the Local Agenda 21 processes in all six countries is making the link between local development planning and global sustainability. This is true even in Germany, where climate protection at the local level is well established.

Another problem is in making Local Agenda 21 a binding municipal policy. Though in all six countries Local Agenda 21 processes are initiated per resolution by the local council, they have yet to find their way into the "normal" everyday political practice. Strategies to remedy this include environmental management systems (Great Britain), involving the local administration more in the action plan (Spain), or establishing sustainability indicators (Germany, Great Britain, Netherlands).

In all six countries, the relationship of Local Agenda 21 to the major local problems is considered crucial. In some cases, however, controversial issues are removed from the discussion in order to allow the local dialogue process to develop more easily (Germany, Sweden).

All six countries wish to be able to measure the success of the Local Agenda processes. For this purpose, sustainability indicators have been defined in all the countries, with the exception of Poland. Such indicators are explored and defined specifically with and for the local community (Great Britain), or one set of indicators is defined for all the municipalities in the country in order to allow comparison (Netherlands).

A difference between the six countries can be found as to the role of the concrete projects in the Local Agenda 21 process. In the Netherlands, Germany, and Sweden the desire to implement concrete measures sometimes takes priority over setting up an action plan with goals, while in Great Britain, Spain, and Poland implementation is clearly the second step. In Sweden and Germany, there seems to be a growing need to link activities under some kind of common objective, in the Netherlands the National Environment Plan assumes this function.

Another difference can be seen as regards what improvements the local authorities in the different countries expect the Local Agenda 21 process to achieve. In Great Britain, for example, Local Agenda 21 should help solve local problems, while in Poland it should promote environmental protection. In Sweden, it should help build new forms of cooperation and help change the behaviour of relevant actors. In Germany and Spain, it should improve participation, communication, and the sense of community.

The innovative potential that Local Agenda 21 has shown so far in the countries studied pertains mainly to the way in which community development planning is designed. New forms of communication and cooperation between departments in the administration, between the administration and other local actors, and between individual groups and institutions outside the administration are an enhancement to municipal policy-making.

Conclusions

For local authorities to be able to undertake successful development planning, they must have the necessary responsibilities and capabilities, as well as the necessary financial resources to carry out their tasks. However, in the discussion on sustainable development the focus must be drawn to levels outside that of local government.

For the future development of Local Agenda 21 it is crucial that impetuses come not only from the environmental, but also from the economic and social sectors. In Germany, a national sustainability strategy that complements local initiatives can be an effective supporting measure for Local Agenda 21. It is necessary to investigate how a system could be set up that coordinates the various Local Agenda 21 processes. Particularly useful at the national level would be public awareness initiatives, the establishment of a nation-wide pool

of ideas and information, or the provision of a link to the international Local Agenda 21 movement. Combining existing grants and programmes for municipalities would further promote the Local Agenda 21 process.

In Germany, a definition for the term "sustainability" must be found which is both adequate and precise and at the same time is so positive and simple that it can be used for wide-scale communication and day-to-day work. Key to the success of Local Agenda 21 will be the initiation of a municipal competition that aims at positive goals instead of focusing on goals with negative connotations such as reductions, avoidance, etc.

The integration of ecological, economic, and social considerations can best be achieved at the project level, which presupposes increased cooperation between the individual departments within the municipal administration. The proposed measures for reforming and modernising the local government are hence consistent with the demands of Local Agenda 21 processes for a (sustainable) local government organization.

As regards participation, in Germany there are three requirements:

It must be decided which actors must be motivated to participate in the Local Agenda process and what is the benefit for both the process as a whole as well as for the actors themselves.

The groups/actors identified must be approached directly or recruited through professional public relations work for Local Agenda 21.

The actors must be engaged in the dialogue processes which are carried out systematically, with a focus, and with professional moderation. Supporting measures include education on sustainability as well as financial support for the use of professional moderation.

The Local Agenda 21 process in Germany should make a stronger linkage between global responsibility and local benefits. An important step in this respect would be a competition among municipalities to raise public awareness of the global impact of local action, for instance, in the area of consumption.

For German communities, there are signs of potential synergy effects between local government reform and local sustainable policy-making. The goals underlying sustainable development should be integrated as a new paradigm in municipal planning and policy-making. Concrete targets and indicators can further contribute to making Local Agenda 21 more binding.

In all six countries, the impetus that Local Agenda 21 has provided thus far are confined to the implementation of a local dialogue. At the same time, more and more efforts are being undertaken in Germany to evaluate the success (or failure) of Local Agenda 21 in terms of content. For this purpose, the work with indicators will be helpful. Whether these indicators should be specific for the local community and hence easy to communicate, or whether they should be more uniform and thus comparable, will require scientific investigation.

Guidelines "Environmental Protection in Land-Use Planning".

Arbeitshilfe "Umweltschutz in der Flächennutzungsplanung".

A. Bunzel, A. Hinzen; 1999. Erich Schmidt Verlag; Umweltbundesamt, Berlin.

The development or the continuation of land use plans has been, and shall continue to be during the next few years, the responsibility of many cities and municipalities in the old and the new German states. Therefore, there will be an aid submitted that will provide suggestions and recommendations for the application of environmental interests in the elaborating process of a land use plan; among other things, at an ecological planning basis level, at the assessments of the site's suitability level and the various indication possibilities in the plan as well as in the included commentary report. The most recent planning ideas, experiences and examples of different municipalities are included in these recommendations.

Concerning the legal aspect, especially the possible consequences of the intervention regulation for the protection of the environment as well as the relation of land use planning and landscape planning are explained.

Guidelines "Environmental Protection in Local Development Planning".

Arbeitshilfe "Umweltschutz in der Bebauungsplanung".

A. Bunzel, A. Hinzen; 1999. Erich Schmidt Verlag; Umweltbundesamt, Berlin.

Given the changing tasks facing town planning and urban ecology, the report provides a working aid which integrates ecological concerns into development planning. Drawing on many years of practical experience at the municipal level in applying instruments of planning law, the working aid has been developed taking account of the changes in the legal framework conditions (BauGB, 1997).

Employing practical cases to explain planning aids that regulate in a reliable way measures with environmental relevance in development planning, the report establishes, first, an up-to-date overview of the decisive key facts about field and planning specific legal issues and, second, an introduction to important essentials about ecological planning.

River Flood Prevention: Suggestions for Improved Planning Tools.

Anforderungen des vorsorgenden Hochwasserschutzes an Raumordnung, Landes/Regionalplanung, Stadtplanung und die Umweltfachplanungen - Empfehlungen für die Weiterentwicklung.

H. Böhm, P. Heiland, K. Dapp, A. Mengel; 1998. UBA-TEXTE 45/99; Umweltbundesamt, Berlin.

In this research, the national framework of river flood prevention and experiences were investigated, implemented tools and were analysed, and their application was tested in case studies of the rivers Elbe and Rhine. Based on current activities on flood prevention (such as policies and specific interventions), regional and local plans and programmes, and specific planning fields (such as water management, nature conservation, agriculture and forestry, traffic management), suggestions for improvements were developed. For each of these fields available tools and legal regulation were analysed. Additional interviews with experts revealed how these tools are used in practice.

The investigation revealed that many of these fields are already provided with a range of tools, operating on different levels, which allow efficient flood prevention. However, their application is fragmentary and cooperation is lacking. Therefore, a system for interlocking available tools needs to be created. Following this principle, suggestions on how to develop and to

complement these tools have been developed. A high proportion of the problems linked with putting existing tools into action are local political and staff constellations, which are beyond the reach of regulations. In such cases, the situation cannot simply improve due to changes in the legal system. Moreover, awareness of flood problems needs to be increased and flood protections has to advance to an important community task.

In focussing on interlocking the different spatial planning fields, the tools suggested reach beyond water management tasks. This paper describes in detail how each planning field can make their contribution to flood prevention within a framework of well coordinated and optimised tools.

Environmental Protection in the Procedure for a Building Permit.

Umweltschutz im Baugenehmigungsverfahren.

A. Bunzel, A. Hinzen, G. Ohligschläger; 1998. Raabe Fachverlag, Düsseldorf.
ISBN 3-88649-537-X.

The approval procedure of building surveyors is of great significance in the realisation of environmental protection requirements in building. Given the amendments in the building laws and by-laws passed in all of the states of the Federal Republic of Germany during the last years, the report examines first current building and environment regulations and their application in practice. The analysis of standard practice in regulation application concentrates on case studies carried out in five cities and one rural district. The focal point of the report lies in the description, first, of the approval proceedings in respect of their significance for environmental protection and, second, of the specialised legal and technical basis and application practice in the following fields:

- Soil protection
- Water protection
- Greening
- Immission control
- Energy
- Transportation facilities
- Waste
- Building components and constructions
- Fitting and running of building sites

The report rounds off with recommendations, first, on the effective integration of environmental protection measures into the approval procedure of building surveyors and, second, on the coordination and accommodation of all concerned in the approval procedure in terms of rendering effective the enforcement proceedings.

Manual "Local Agenda 21" - Towards a Sustainable Development in Cities and Towns.

Handbuch "Lokale Agenda 21" - Wege zur nachhaltigen Entwicklung in den Kommunen.
Prepared by: S. Kuhn, C. Vollmer, M. Zimmermann (ICLEI), 1998. Bonn, Berlin.
Edited by: Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit,
Umweltbundesamt.

The task of federal government, the Länder and leading local authority associations is to support and push through the Local Agenda 21 process in dialogue with all the institutions involved, taking into account the guarantee of self-government by the local authorities which

is embedded in the constitution. In a joint declaration dated 10 September 1997, the Federal Ministry of the Environment and the leading local authority associations gave further express assurance to do this. A joint declaration by the Conference of Environment Ministers and the leading local authority associations dated 8 May 1998, also has the same objective in mind. Special emphasis is placed here on the importance of support on a partnership basis through information, opportunities for exchanging ideas, method-based help and projects of a model nature.

In order to concentrate the local agenda activities in Germany and structure these more effectively, in 1996 the Federal Environmental Agency awarded the research project entitled "Environmental Effectiveness of Local Agenda 21 Plans" to the International Council for Local Environmental Initiatives (ICLEI) in Freiburg. An exchange of information and experience was organized on a nationwide basis via workshops, circulars and topic sheets; the local authorities directly involved joined together to form networks and in this way were able to provide each other with mutual technical support. The main outcome of this project is the "Local Agenda 21" manual published jointly by the Federal Ministry of the Environment and the Federal Environmental Agency which contains a wealth of recommendations, information and examples from practitioners for practitioners - entirely in accordance with the literal meaning of the word "Agenda": What must be done?

The "Local Agenda 21" manual is aimed primarily at the actors involved in drawing up a local agenda as well as those responsible for local authority policy and government, at local associations and organizations as well as all interested citizens. The aim is to provide technical support for local authorities who have already begun an agenda process and, in addition, to motivate other local authorities to introduce an agenda process. The manual deals, for example, with the question of how to initiate and structure an agenda process. The special role of the various actors within the framework of consensus-building, are also described. In addition, the manual highlights the contents of a local agenda as well as criteria used in assessing the effectiveness.

It is becoming clear to see that the agenda processes are not proceeding according to a standardized pattern, more correctly, there are differences between the local methods by which the elements of a Local Agenda 21 are arranged and put into context. At present, the numerous versions are based on the following main types in this context:

The Local Agenda 21 as a new, integrating planning instrument for future development within a local authority.

The Local Agenda 21 as a framework for the further development of existing planning and action instruments in terms of their "sustainability".

The Local Agenda 21 as a platform for the realization of specific projects which combine environmental, economic and social aspects, with involvement by the local actors.

It must be noted that such a complex process as a Local Agenda 21 cannot be properly coordinated and produce a result that satisfies a consensus of opinion, without soundly researched background as well as technical knowledge and practical experience. Local government and local representation play a "key role" in this context.

The manual and the exchange of experiences on a nationwide basis have provided a key impetus for the structure of the Local Agenda 21 process in Germany. An increasing number of cities and local districts are taking the opportunity to initiate future-orientated development with the help of Agenda 21; there are signs of a positive trend in this development.

The "Local Agenda 21" manual, together with additional information and materials, can be obtained free of charge from the Central Answering Service of the Federal Environmental Agency.

Criteria and Key Questions for Assessing the Environmental Effect Potential of a Local Agenda 21

1	Consequence	Are the goals orientated towards a sustainable use of resources?
2	Integrity	Are ecological goals compatible with economic and social goals?
3	Long-term nature	Are the formulated goals long-term? Are they aimed at making provision?
4	Global contribution	Are the consequences of local development measured against the global development?
5	Decision	Was the decision to formulate the Local Agenda 21 taken by the Council? Was the action plan decided by the Council?
6	Specific nature	Are the stated goals specific, measurable and linked to deadlines?
7	Action-orientated nature	Are stipulated measures or packages of measures specified for achieving the goals?
8	Bind nature	Are the agreed goals binding for all technical planning and subsequent policy-related decisions?
9	Efficiency	Is the cost effectiveness of the measures stipulated?
10	Financing	Are the level, availability and source of the finances for the implementation of the measures stipulated?
11	Progress monitoring	Is the attainment of goals measured on the basis of indicators?
12	Political consensus	By what majority were the resolutions passed?
13	Relevance	Do the goals relate to the priority local problems?
14	Consensus of the citizens	Are local actors and groups of actors committed to the implementation of the measures?

German Conference on National Level "Sustainable Development in Cities and Towns - Local Agenda 21" (Bonn, 2/3 June 1998).

Bundesdeutscher Kongress "Nachhaltige Entwicklung in den Kommunen - Lokale Agenda 21" (2./3.6.1998 in Bonn).

Veranstalter: Bundesumweltministerium, kommunale Spitzenverbände mit fachlicher Unterstützung durch das Umweltbundesamt.

On 2 and 3 June 1998, the Federal Ministry of the Environment together with the leading local authority associations staged the congress entitled "Sustainable Development in Cities and Towns - Local Agenda 21" in Bonn. The Federal Environmental Agency provided technical support for the preparation and staging of the congress.

The aim of the two-day conference was to intensify the dialogue and exchange of experiences towards a sustainable development in the cities, towns and districts of Germany. Some 650 participants - representatives from federal government, Länder and local government, industry and trade unions, science as well as social groups - discussed courses of action designed to advance the Local Agenda 21 process.

The basic tenor of the event was that the Local Agenda 21 offered the perfect opportunity to place new emphases on future-orientated development in the towns and cities, consequently the structure of this process comes under the responsibility of and participation by all social groups. The aim is for Agenda 21 processes to be carried out as far as possible in all German cities and towns over the course of the next decade.

An analysis of the guest speakers, discussions and response to the congress showed that the following areas of action are emerging as the core areas for the purpose of sustainable local development:

Local Agenda and industry, including environmental management systems
Town and residential development (in particular, land utilization)
Traffic / mobility
Energy utilization and climate protection.

The development of sustainable settlement structures, in particular, will be an impossible task without the cooperation of the towns and cities. As such, call by many of the guest speakers at the congress to counteract the close correlation between economic growth and land utilization, is to be welcomed. The draft of a programme of environmental policy emphases by the Federal Ministry of the Environment in 1998 formulated the target of reducing the daily land utilization for settlement and traffic purposes from the current 120 ha to 30 ha per day by the year 2020. The Federal Environmental Agency has already published numerous planning aids on the subject of "land utilization" for cities and towns and in this way created key bases for a comprehensive strategy designed to reduce the land utilization.

The conference participants also saw a particular need for action in the search for specific measures and projects which lead to the creation of synergy effects for the towns and cities and industry (for example, so-called win-win projects, contracting financing models). In addition, reference was made to the necessary inclusion of the appointed and constituted local committees (in particular, the local representation) into the agenda processes and to the linking of the Local Agenda 21 with the existing planning and control instruments on a local level, some of these instruments being enshrined in law.

In the opinion of the guest speakers, solution strategies should also be developed in the following problem areas:

Improvement in the decision-making process and progress monitoring on the basis of comprehensible indicators;
Financing of local agenda processes, at least in the start phase;
Consideration given to the global and international dimension of Local Agenda 21 processes: local development collaboration, partnerships between local authorities;
Motivation of the citizens and local groups to participate in the Agenda 21 process;
organization of the consensus-building process.

The federal government was called on to further expand the existing offers aimed at supporting the agenda initiatives in the towns and cities. This applies in particular to carrying out research projects, the orientation of technical conferences and workshops as well as the provision of service information. In the area of research, this would conceivably produce a differentiated view of the various types of local districts, the participating actors, the method versions as well as the content-related action areas.

A set of congress documentation can be requested free of charge from the Central Answering Service of the Federal Environmental Agency.

Towards a Local Agenda 21 for Berlin-Köpenick.

Part I: Report on the process

Part II: Operational

Der Prozess zu einer Lokalen Agenda 21 für Berlin-Köpenick.

Teil I: Bericht zur Prozessbegleitung

Teil II: Arbeitsblätter

Arbeitsgruppe Entwicklung und Fachkräfte im Bereich der Migration und der Entwicklungszusammenarbeit GmbH (AGEF), Deutsches Institut für Urbanistik (difu); 1998.
Teil I: UBA-TEXTE 41/98, Teil II: UBA-TEXTE 42/98, Umweltbundesamt, Berlin.

An increasing number of German towns and cities are creating initiatives aimed at formulating models and action programs for sustainable development and their conversion into specific measures and projects. The Berlin district of Köpenick is also amongst one of the first local authorities to have placed its activities under the umbrella of a Local Agenda 21 (LA 21). The so-called Köpenick three pillar model - local government, environment and development forum (general public), churches - was developed as part of a process covering a number of years; the importance of this model now having also spread beyond the borders of Köpenick. The first working draft of the Local Agenda 21 was completed at the end of 1996. At the beginning of 1998, the second draft of the Köpenick LA 21 was handed out to the local people in a symbolic presentation, initiating a new phase of the discussion process.

Over a period of two years, the Federal Ministry of the Environment and the Federal Environmental Agency, together with the Committee for Development-Based Education and Journalism of the Religious Development Service Working Group (ABP), sponsored an associated project to the agenda process initiated in Köpenick. The Development and Technical Personnel Working Group in the Area of Migration and Development Cooperation (AGEF), Berlin, was commissioned to provide support for the Environment and Development Forum and the churches. The German Institute of Urban Affairs (difu), Berlin, provided support for the regional authority during this period. The experience gained "in situ" has been prepared in such a way that it can also provide other towns and cities with recommendations and information, taking account of the respective situation specific to the individual areas. The emphasis in this respect, according to the activities to date in Berlin-Köpenick, is placed on organizational and structural aspects of the Local Agenda 21 process.

Some of the findings are highlighted below as an example:

The aim, in parallel with the program-related formulation of a Local Agenda 21, should be to convey the principle of sustainability to the general public at large on the basis of existing, specific, illustrative sample projects.

Setting topic-related, problem-orientated emphases on the further structuring and implementation of Agenda 21 ("key role"), helps to reduce the complexity and motivates citizens towards greater personal involvement.

Within the framework of the Local Agenda process, it is important to take account of the day-to-day life of the people in a local district and to base the activities on this.

New methods of cooperation must be developed for the inclusion of the local population and local groups in the value definition and planning process in order to create a balance between the interests. Within the dialogue process, joint action strategies must be formulating, conflicting objectives identified and priorities set.

Comprehensible indicators (parameters) should be put in place in order to provide for public control to determine whether and to what extent set targets have been reached.

UMPLAN - Information System for Processing and Generating Environmentally-relevant Contents and Statements in Environment-related plans.

Informationssystem über umweltrelevante Ziele und Ausweisungen in räumlichen Plänen und Programmen (UMPLAN).

J. Nouhuys, C. Jesorsky; 1997. UBA-TEXTE 40/98; Umweltbundesamt, Berlin

UMPLAN is a cross-section oriented, interdisciplinary information system for spatial environmental planning. It carries information about the position and contents (planning statements) of the general land use planning as well as of planning performed within the various fields of environmental management (landscape, forestry, waste disposal management, etc.). Sources of information are the (analog) planning documents from particular departments or agencies for individual subject areas such as plans for water resource and general land-use plans.

The core of the system is a polyhierarchic and polydimensional thesaurus for spatial environmental planning (UMPLAN Thesaurus) which makes it possible to generate and search for complex plan statements as well as to relate those statements to one another, both within particular fields and, first and foremost, across the various disciplines. Here, were are concerned with statements about environmental damage, development aims and planning conflicts.

UMPLAN allows one both to gain an overview of the current environmental planning "what planning mechanisms and environment-related plans exist for which region at what level?") and to draw conclusions concerning gaps in the planning, planning trends, methods and quality, thereby indicating necessary steps in the further development of the space-related environmental planning as well as of the planning within particular fields.

Deregulation in Building Order Law as an Approach to Improve Environmental Protection - Pre-Study to Assess the Expected Use of Deregulation.

Deregulierung des Bauordnungsrechts als Lösungsansatz für einen verbesserten Umweltschutz - Vorstudie. Forschungsgruppe Stadt und Land, R. Schäfer; 1998, UBA-TEXTE 16/98; Umweltbundesamt, Berlin.

The simplification and acceleration of the method to obtain building permission is an important part of the discussion concerning deregulation, de-bureaucratization, and the delegation of federal tasks that has been regularly held for decades. The aim of the investigation, within the frame of this preliminary study, is to check if and to what extent these recent deregulatory approaches are compatible with the safeguarding of environmental protection standards, which in the meantime has become the explicitly stated goal in the majority of the state building orders. It is to clarify if and to what degree approaches of this sort can lead to an improvement of environmental protection in the building permit procedure and in the building industry. Deregulation can be understood as a "catch-all" term which includes the efforts to reduce present regulations, as well as efforts to simplify complex regulations to make them more effective.

In regard to a typology of deregulation, the three main areas of deregulation to be distinguished are: in norm-setting, in administration, and in legal control. Tendencies of further deregulation under adjective law of the building order law are recognisable, to the effect, that even for projects with an increasing degree of difficulty, the obligation to implement a normal building permit procedure is increasingly replaced in favour of the simplified permit procedure or notification procedure. Completely unlike the adjective building order law, the substantive building order law proves to be extraordinarily resistant to attempts at deregulation. There exists a considerable need for analysis and concept development.

A main study could and should contribute to the clarification of essential questions. The main study should cover a wide spectrum of questions and should consist of the following four elements: systematic empirical evaluation of the results of deregulation up-to-the-present, more in-depth analysis of substantive deregulatory possibilities and necessities relevant to environmental protection, development of requirements for auditing concepts in scope of the state building orders considering aspects of environmental protection, development of requirements for future technical notaries.

Consideration of Environmental Concerns with Regard to the Further Development of Town Planning Legislation.

Berücksichtigung von Umweltbelangen bei der Fortentwicklung des Stadtplanungsrechts. K.-M. Groth, G. Ohligschläger et al.; 1998. UBA-TEXTE 12/98, Umweltbundesamt, Berlin.

The expertise was made in the course of the legislative procedure for the amendment of the Construction Code (Baugesetzbuch) and served to the Federal Environmental Agency (Umweltbundesamt) as aid to advice and decision in the framework of coordinating departments and further deliberations.

On the basis of the debate on sustainable development and on proposals, recommendations and approaches to action of science and practice, there is presented in the first part of the expertise a profile of the requirements as to town planning under the principles of permanent environmentally suitable development. There is considered to be the central approach for planning a permanent environmentally suitable city development, in this connection the "Area Acting Scheme". The study considers appropriate models of area development. It is dealt with the distribution conflict between the requirements of nature and use with regard to the limited resource of area deducting therefrom the requirement of setting specific minimum qualities in the sense of the environmental quality targets of the whole city and of parts of the area, in order to obtain bases for the planning decision process according to the model of a compact, mixed city. The issue of the suitability of a location was underlined as decisive for the localization of new projects, and there is discussed the importance of avoiding interventions of legal relevance for the protection of nature.

The second part of the expertise is dedicated first to the consideration of environmental concerns according to the legal position as it stood up to 31 December 1997, assessing,

particularly, the regulation of compensation for interventions at that time as well as the assessment of environmental impact in the framework of urban development planning. Successively, the report refers to the consideration of environmental concerns in the draft presented by the Federal Government as well as to the remonstrance of the Federal Council. Going on from this, it follows a legal consideration of the Government Draft, and it ends with prospects for the further development of the consideration of environmental concerns.

Planning Action Targets

Sustainable Residential Land Development

- Documentation and evaluation of the regional and local potential of the natural balance
- Preserving the particularly important and efficient areas of the natural balance
- Utilization of the internal development potential before using land in other areas
- Defining priorities for the utilization of land in the internal and outlying area
- Additional land utilization in the outlying area only on the proviso that the intrusion is offset completely and in such a way that meets function requirements
- Mobilization of building land reserves in built-up areas in the form of empty sites, unused and conversion land
- Compacting of underused land, further development of existing approaches to residential housing integrated into the urban planning
- Selection of sites and allocation of use of new settlement land according to the ecological suitability of the site
- Safeguarding sufficiently large working areas, development of a regional habitat network system
- Preservation and inter-linking of inner city green sites
- Definition of environmental quality targets for new building land as with protected areas for secondary compaction
- Clustering transport and infrastructure routes
- Avoiding traffic through residential, traffic and infrastructure planning
- Consolidating and expanding efficient local public transport, development of interdistrict local transport concepts
- Development resp. secondary compaction of settlement focal points along efficient local public transport stopping points
- Promotion of mixed usage in locations integrated into the urban planning, full utilization of the infrastructure facilities
- Avoidance of segregation through maintenance of commercial land
- Promotion of contractual multi-uses of building land
- Ecologization of the residential building stock
- Reclaiming land allocated but no longer used for building and development in areas highly effective in terms of the natural balance

Urban Agglomeration in View of Leisure and Outdoor Activities.

Bewegungsraum Stadt.

H.J. Schemel, W. Stradas; 1998. Meyer und Meyer Verlag, Aachen.

ISBN 3-89124-489-4.

Increased leisure is not only accompanied by an increase in leisure and sports activities but also an increase in traffic. The diverse requirements placed on the functionality of the cities and the increase in the traffic, have in many cases simultaneously restricted the quality of life in the cities and, in particular, the quality of time spent in the public area. This trend runs counter to the objectives of environmentally sustainable urban development, the objective of the "city of short distances".

This study is intended to help reverse this trend; it highlights ways and practical bases on how sport, leisure and recreation can be combined on the local level with environmentally-orientated urban development. The Office for Environmental Research and Environmental Planning, Munich, in cooperation with the Office for Tourism and Recreation Planning, Hanover and Berlin, was commissioned to formulate building blocks for the creation of environmentally-friendly sports and leisure opportunities. The project was assisted by a working group in which, in addition to the Federal Environmental Agency, the Federal Ministry of the Environment, the Länder of Berlin and Brandenburg, the Association of German Cities and Towns (DST), the German League for Nature and Environment (DNR) as well as sports associations (DSB, LSB) were represented.

Strategies, approaches and practical examples for sports and leisure activities were analysed and evaluated on the basis of a nationwide survey amongst the member cities of the Association of German Cities and Towns as well as a supplementary evaluation of the available literature, for the purpose of providing support for environmentally sustainable urban development. 54 projects, primarily from German cities and districts, were studied in depth.

The projects can be assigned to six different areas of action with specific approaches to action in each case (see Diagram 1).

The specific local conditions vary considerably; however, the numerous examples shown, together with their very differing approaches, should enable potential actors to find a project that suits their framework conditions so that an exchange of experiences could be set in motion. The respective institutions are named.

The study clearly illustrates that in the towns and cities there are a large number of current projects which should be seen as building blocks for a form of urban development which is environmentally compatible and offers attractive leisure opportunities. Although the planning and activities are only in a few cases embedded within an overall strategy for a form of urban development that offers attractive leisure opportunities and is environmentally-orientated (such as for example the planning and implementation of the "Frankfurt am Main Green Belt" project or the numerous examples from Munich), in the towns and cities, however, there is a range of innovative measures that represent elements of such an overall strategy. In this context, the commitment of individuals or groups, the early inclusion of all the participating actors throughout the various departments (environment, leisure and sport, urban planning and urban development) as well as the negotiating expertise of those involved on the various sides, as important prerequisites for the success of planning and measures.

The analysis of the examples also shows that there are the aspects of liability and noise, in particular, that play a crucial role in the acceptance of the implementation of planning and measures. Examples do, however, show that the measures do not fundamentally have to fail because of these problem areas and that by heeding specific conditions, it is possible to find solutions which meet the basic principle of a function mix from the urban development aspect and do not accelerate a further spatial separation of functions. To this extent, the results can be incorporated into the efforts in the search for a "city of short distances" as a building block for sustainable urban development and consequently support this strategy which should also be followed from the environmental aspect.

With regard to the financing of the corresponding measures, financial restrictions in the public purse do not also have to mean that measures aimed at improving and increasing the attractiveness of the "city as activity area" are to be considered as a "no go". In countless cases, instruments other than the conventional methods of finance open up opportunities for these measures to be realized (for example, sponsorship, contribution to costs).

Diagram 1

Areas of and recommendation for action for a form of environmentally compatible urban development offering attractive leisure facilities

Areas of action for a form of environmentally compatible urban development offering attractive leisure facilities	Action Recommendations
New concepts for and reorganization of "conventional" sports and leisure facilities	<ul style="list-style-type: none"> •Select locations close to residential areas •Integrate sports facilities into the urban outdoor leisure system •Increase the quality of experience offered by sports centres •Promote simple facilities •Coordinate the re-organization measures with the sports clubs •Look at the possibility of sports men/women contributing to costs •Convert sport fields into leisure facilities
Utilization of green areas for leisure and activity	<ul style="list-style-type: none"> •Give urban parks a multi-functional structure •Create a network of the activity areas throughout the urban landscape •Create a city design that is both leisure and activity friendly •Safeguard and develop the city's outdoor areas in plenty of time •Build sports centres and leisure facilities so they offer flexibility •Combine leisure and sports facilities with the opportunity to enjoy nature
Conversion and co-use of areas and buildings which are not normally intended for sports activities	<ul style="list-style-type: none"> •Open school play areas for children and young persons outside school hours •Foster and promote an "urban activity culture" •Make intensive efforts in the co-use of traffic areas in push through traffic calming measures •Identify and place importance on "adventure" potential of unused industrial sites •Make commercial areas more attractive •Convert empty commercial buildings into sports facilities close to residential areas •Make use of opportunities for limited period offers •Secure replacement land for lost empty sites •Involve young people in the creation of leisure sport facilities and offer educational support •Take up and utilize initiatives put forward by local people •Improve the acceptance of innovative measures through public relations work •Seek financing for innovative measures as projects to serve as models within the framework of the higher level development programme •Demonstrate the courage to take an unconventional approach, without any red tape
Creating the facility for rural-based sports in the city	<ul style="list-style-type: none"> •Restore the natural aspects of urban recreation areas •Create axes of linear recreation from the conurbation areas into the surrounding area •Create opportunities for water sports in the city •Create artificial facilities to relieve the burden on natural landscape elements •Realize regional concepts through inter-district cooperation or local authority associations
New types of implementation forms: cooperation, participation, sponsorship and ..	<ul style="list-style-type: none"> •Form inter-district working groups to promote new sports opportunities •Improve cooperation between local government and the citizen •Build simple facilities •Transfer facilities to clubs for use under their own responsibility •Promote the "modernisation" of traditional sports clubs and

Areas of action for a form of environmentally compatible urban development offering attractive leisure facilities

Action Recommendations

financing models

associations

Solution approaches in the problem areas of liability and noise

- Make increased use of private capital in the form of mixed finance and sponsorship
- Levy leasing charges or user tariffs to cover costs
- Provide vigorous support for the activity needs of children and young people
- Create a balance between the need for activity areas close to residential settlements and the need of the residents for peace
- Incorporate non-standardized sports facilities into the Noise Prevention Act
- Display initiative in amending existing legislation and decrees
- Make the structure of activity and sports opportunities not standardized, exciting and also allow risks in this respect
- Do not allow suitable activity and sports opportunities of an unusual nature to be missed because of liability questions

Green Areas and Open Spaces - Requirements in the Planning Approval Procedure.

Grün- und Freiflächen - Anforderungen im Planungs- und Genehmigungsverfahren. Deutsches Institut für Urbanistik (difu); Berlin, 1998. ISBN 3-88118-266-7.

This working aid aims to contribute towards clearly illustrating and strengthening the "green issues" in the planning and approval procedure. It shows which legal and practical possibilities and limits exist for the development and implementation of requirements for planning and specific construction projects on a development site. To this end, the existing legal possibilities are developed and sample applications from local practice presented.

"Green issues" are understood to be in particular:

Landscaping and planting shrubs, bushes and trees on undeveloped land and structural facilities,

Protecting areas of land from over-development and sealing as well as the seepage of precipitation and

Protecting and creating habitats.

Measures relating to waterways and the water balance are dealt with, insofar as these exist, in conjunction with the structure of the waterways and the soil. Ecological requirements in the field of emission protection and energy saving are not discussed in detail.

The current possibilities from the rural and urban development planning aspects for the improvement of the environmental conditions through green-related measures are at present not being utilized to the full in local practice. This is to be attributed not least to uncertainties about uses. In view of the loopholes in applying the planning instruments, particular importance is attached to considerations for giving proper recognition to green-related matters "below the planning level", in other words, on the level of the specific construction projects. In particular, the question is examined as to whether the instruments of urban planning regulations and nature conservation law can be used to achieve an ecologically sensible structure of the development land no longer required for making full use of the

permitted development possibilities, and whether more landscaping, for example, in the form of planting bushes, shrubs and trees, can be incorporated into the developed areas.

The possibilities and problems of implementing landscaping-related requirements for projects are essentially determined:

by the actual specific nature of the relevant individual case which can be attributed to typical situations, in particular the location in the settlement structure, the type of use and the characteristic as a new construction or old construction,
by the current applicable planning, building regulation and nature conservation law framework conditions which open up the opportunity for regulating green-related issues to a differing extent.

The legal framework conditions can be divided into four basic situations which, in reality, also frequently overlap:

Projects in the area, with green-related stipulated requirements of a landscape, environmental or development plan,
Projects which utilize the opportunity of an exception or exemption under planning regulations (Article 31 BauGB),
Projects which utilize the opportunity of an exception or exemption under building regulations (e.g., Article 61 BauOBl),
Projects which are simultaneously associated with intrusions in nature and landscape.

Under the new edition of the Federal Building Act, with the new Article 1a, the rule covering intrusion under nature conservation law applies directly to building regulations. As such, experiences with green-related, stipulated requirements in the development plan are of particular relevance.

In local practice, there are still considerable uncertainties regarding uses with the rule on intrusion within the framework of the development planning. By providing evidence of possibilities for environmental controls, this working aid is intended to give support for their implementation, based on reasoned argument.

This working aid is divided into an analysis and a documentation section. One of the focuses is on the synoptic preparation of the contents of nature conservation and building regulations, specific to the individual Länder, in order in this way to provide for a rapid and transparent comparison of the respective regulations in the various Länder. The analysis evaluates, on the one side, the abilities for stipulating and presenting requirements in landscape, environmental, development and other planning and statutes and, secondly, the possibilities that exist directly under the building regulations and other regulations pertinent for building approval.

This working aid is supplemented by a documentation section in which applications used in local practice derived from development and landscape planning as well as other statutes and decrees with stipulated requirements from the environmental aspect are prepared by topic groups to provide examples.

Structure of Leisure, Recreation and Tourism Compatible with the Needs of the Environment - Action Approaches for Towns and Cities.

Umweltgerechte Gestaltung von Freizeit, Naherholung und Tourismus - Handlungsansätze für Kommunen.

Deutsches Institut für Urbanistik (difu); Berlin, 1998. ISBN 3-88118-263-2.

Tourism, local recreation and leisure facilities are closely inter-linked, particularly in terms of their effects on the environment. Tourism associations in regional areas and urban outlying districts create the same type of leisure facility offers as the cities themselves. However, high visitor frequency, particularly to environmentally sensitive landscapes, does have negative consequences for the environment such as the increasing urban sprawl, threat to the flora and fauna as well as the air and noise pollution created by leisure and holiday traffic. Practically every type of activity undertaken during holidays, recreation and leisure has a direct or indirect detrimental effect on the environment.

The need for an intact environment and the wish to be close to nature has grown increasingly amongst the urban population in particular. Consequently, landscapes which are close to nature are having to cope with large numbers of visitors. In addition to the quantity and quality of the activities, the need for protection and the sensitivity of the eco-systems affected are considered important for the type and intensity of the environmental effects.

Many local authorities which benefit from tourism are endeavouring to compete with other local authorities by making attractive offers. They are therefore endeavouring to meet the potential wishes of those seeking recreation by providing as many outstanding leisure offers as possible. Particularly with the types of sport currently in trend (e.g. mountain-biking or snowboarding), despite the supposedly competitive situation, the aim should be for cooperation to take place between the neighbouring districts to prevent "overuse" and to enable encouragement to be given to "channelling" the activities.

Environmental damage or environmental pollution in holiday and recreation areas can lead to visitors subsequently seeking new, unpolluted destinations until these in turn are polluted and so on. Forward looking, preventative environmental protection in this context means taking controlling action in good time before negative environmental consequences arise. Designated paths, information boards and excluded zones for areas of particular environmental sensitivity are some of the examples of the possible controlling instruments; however, these cannot solve all the problems by themselves (e.g., the fact that most visitors arrive by car). Concepts in this area must apply to several levels of environmental protection. The local authorities have particular responsibility in drawing-up the concepts and carrying out measures. It is therefore worthwhile seeking to take into account both environmental as well as economic and social aspects as well as the local conditions and at the same time for cooperation to take place between all the actors involved. This not only applies for major tourist projects and leisure facilities for which an environmental impact assessment is required by law.

The publication gives examples of approaches to action by the local authorities in order to avoid or alleviate environmental damage and create an environmentally-friendly tourism, leisure and local recreation structure. Checklists are offered for many of the areas of action.

Public Relations Work in the Area of Local Authority Environmental Protection - Examples for the Energy and Water Action Areas.

Öffentlichkeitsarbeit im kommunalen Umweltschutz - Beispiele zu den Handlungsfeldern Energie und Wasser.

Deutsches Institut für Urbanistik (difu); Berlin, 1998. ISBN 3-88118-270-5.

Local environmental protection is impossible without the active involvement of the people. The citizens themselves represent the most important factor in effective environmental protection.

A range of studies and surveys have shown that the protection of our environment is seen by an overwhelming majority of the population as an important political task. The increased environmental awareness is, however, counteracted by a reducing willingness to also draw the practical conclusions from the problems identified, on personal level (e.g., traffic: the level of vehicle mobilization and the number of miles driven privately is steadily increasing).

Public relations work in environmental protection should encourage environmental awareness and bring about a change of attitude amongst the population. This requires on the one side the citizens to be given information on the objectives and measures relating to local environmental protection. Secondly, knowledge of the attitude of the population to the environment is important for local government to enable specific abilities of action to be drawn up for the target groups.

Public relations work in local environmental protection is a voluntary service of the local authorities and is not stipulated as a legal requirement. However, in accordance with the principle of prevention, environmentally-related public relations work seen as a vital local task for influencing action and attitude and reflects the needs of the environment; the reason being that preventative environmental protection is cheaper than the subsequent cost of remedial or cleaning measures. For example, the disposal of waste or maintaining clean water always creates higher costs in the towns and cities. If the costs for high profile public relations work aimed at avoiding and reducing environmental pollution are then taken into account, they can be seen to be very low by comparison.

The publication is dedicated to the opportunities for local public relations work focusing on "energy" and "water" as these are particularly important topics with regard to environmental communication. Energy and water-saving programmes are central approaches of a policy of preventative environmental protection and make substantial contributions towards environmentally compatible, sustainable development in towns and cities.

The publication provides information on concepts, methods and strategies for environmentally-related public relations work in these two action areas of local environmental protection. A range of sample materials from the cities (brochures, information sheets, exhibition announcements) is presented. In addition to its own research and materials from the German Institute of Urban Affairs (difu), the findings from a survey of cities with more than 50,000 inhabitants have been incorporated into this topic-based publication.

Local Energy Management - Introduction and Guideline to
Addresses, Periodicals, Literature.

Kommunales Energiemanagement - Einführung und Wegweiser zu Adressen, Zeitschriften,
Literatur.

Deutsches Institut für Urbanistik (difu); Berlin, 1998. ISBN 3-88118-253-5.

The oil crises in 1973 and 1979/80, which created a sharp increase in oil prices, clearly showed that supply structures which depend upon scarce fossil fuels, provide no guarantee for reliable planning. Since then, many towns and cities have developed local energy management programmes aimed at reducing energy consumption in their own buildings. Initially, it was primarily the larger cities (with more than 100,000 inhabitants) who examined questions relating to energy consumption by local government. Since then, however, cities from just 14,000 inhabitants are also carrying out targeted measures aimed at reducing energy in local government buildings. However, the majority of cities and districts of less than 100,000 inhabitants have still to develop a local energy management programme.

A range of tasks associated with energy consumption in local government properties is being drawn up under the general heading of "Local Energy Management" (KEM). Local Energy Management covers measures designed to reduce energy demand in the heating and electricity area as well as measures aimed at conversion to efficient forms of energy and environmentally-friendly energy production in local government buildings and, if necessary, in other areas of consumption by local government such as street lighting, treatment plants or fountains. Within the overall context of all energy policy activities by the towns and cities, energy management must be seen as an individual task which affects purely the local government buildings as consumers or even as energy producers themselves. It represents the most direct opportunity for action from the energy policy aspect for enabling the towns and cities to save both, energy and money. Top priority should therefore be given to Local Energy Management within the framework of local action strategies designed to produce energy savings.

From today's viewpoint, the following objectives are important for Local Energy Management:

- Protection of the scarce fossil fuel resources,
- Reduction in local operating costs,
- Reduction of pollutants in the air (e.g., SO₂, NO_x),
- Reduction in CO₂ emissions as a contribution towards climate protection.

Establishing a Local Energy Management programme will enable the towns and cities on the one hand to perform their function of providing a model and, secondly, contributing towards motivating other consumer groups. The purpose of energy management is to create the credibility of local politics as every personal commitment by local government will only have a convincing effect if consistent energy-saving measures are taken in the local government buildings. The implementation of a local energy-saving programme can also trigger employment and qualification effects through public investment in energy-savings, something which will promote the environmental orientation of skilled trades sector. In addition, strategic benefits for a more far reaching, local energy-saving and climate protection policy are produced through the creation of organizational structures and embedding of technical expertise within the local authority. This will provide for optimum cooperation in CO₂ reduction and energy concepts throughout the local authority and increase the expertise through experience gained in public sector pilot projects.

The publication provides an overview of the key questions relating to Local Energy Management and is intended to be used as a working aid in particular by those cities who are engaged in the introduction of this important local task. Technical-based details are explained using the example of the city of Saarbrücken since this city has been operating a Local Energy Management programme in 1981.

Soil Protection - Introduction and Guideline to Addresses,
Periodicals, Literature.

Bodenschutz - Einführung und Wegweiser zu Adressen, Zeitschriften, Literatur.
Deutsches Institut für Urbanistik (difu); Berlin, 1997. ISBN 3-88118-241-1.

The soil is the central environmental medium for countless ecological processes. Close interaction takes place between the soil and the surface and ground water, the air and the biosphere. The ability of the soil to function represents the vital prerequisite for maintaining most material cycles and energy flows of the eco-systems.

The commercial use of the soil, which has been intensified in recent decades, as well as its increasing sealing, have led to considerable intrusions in the natural and nature-related

regulating mechanisms of the soil eco-systems. On the one side, polluted land is being redeveloped at high financial cost so it can be prepared for further use, secondly there is evidence of an increasing use of soil through construction programmes (industrial areas, residential building, creation of transport areas).

Against this background, increasing importance is being attached to soil protection and all the associated tasks and activities in the towns and cities.

The towns and cities can make a contribution to soil protection by making decisions relating to individual cases, buildings or locations such as e.g. in the redevelopment of polluted areas or in the prevention of materials contaminating the soil. In addition, the opportunity exists within the framework of the development planning and carrying out structural measures, to decisively define the type and extent of the soil use and land utilization. The towns and cities are also called on to formulate and implement their own concepts and programmes relevant to soil protection.

This working aid is intended to provide a contribution towards supporting local soil protection activities by not only giving a technical explanation of the existing problems, objectives and available instruments but also naming institutions for questions relating to soil protection and making reference to events. It also contains extensive literature references, a breakdown according to technical subjects, as well as a selection of relevant periodicals.

Compact, Accessible, Urban: An International Comparison of Urban Development Strategies to Avoid Traffic.

Kompakt, mobil, urban: Stadtentwicklung, Konzepte zur Verkehrsvermeidung im internationalen Vergleich.

D. Apel, M. Lehmbruck, T. Pharoah, J. Thiemann-Linden; 1997. Deutsches Institut für Urbanistik (difu), Berlin. ISBN 3-88118-234-9.

Problem

Human settlement and travel patterns are closely interrelated. Given that both have major implications for natural resources (land, soil, energy) and substantial environmental impacts (emissions, noise, threat of accidents, barriers in urban environments), they are factors of major significance for the sustainability of towns and regions.

The continuing expansion of human settlements is attributable not only to growing space demands arising from almost all forms of urban land use. The use of private motor vehicles in particular consumes immense areas of land and fuels urban sprawl. Increasingly disperse settlement patterns, or the suburbanization of the environs of cities, further expand travel demand and dependence on private cars. The result is a self-perpetuating, spiralling growth of settlements and traffic volumes. In the new Länder, this process is concentrated in an unusually short time frame, with all the attendant repercussions such as loss of open landscapes, higher energy consumption and continuing emissions.

It is clear, if only for the reasons stated above, that the problem cannot be solved merely by improving traffic management and by switching to greener modes of transport alone, but that the traffic volume needs to be reduced by appropriate regional planning. The universally accepted formula for a traffic policy which is environmentally sound and relieves urban stress is therefore: avoid traffic, shift traffic flows, reduce the impacts of traffic on the environment. The choice of sequence is deliberate and intended to express an order of priorities. However, traffic avoidance in practice is still in its infancy.

Issues and Methods

This is the background to a project entitled "Case Studies Evaluating Land Use Planning Strategies Which Reduce the Need to Travel, Having Regard to Environmental Aspects". The German Institute for Urban Studies conducted the project on behalf of the Federal Environmental Agency (Umweltbundesamt), Berlin. The main questions it addressed were:

- What form of settlement structure induces less road traffic than other settlement structures?
- What are the distinguishing elements and characteristics of a spatial development strategy which reduces travel demand and the environmental impacts of traffic?
- Are there any urban structures in Europe which consistently produce lower traffic volumes, and what can we learn from them?

Since the topic is so complex, a wide variety of methods was applied in the project, from case studies and comparisons of cities based on urban structures and traffic data, to a survey of cities and model calculations.

The first and foremost component of the project focused on case studies of cities and urban regions of different sizes and structures where existing urban planning strategies seemed to offer an above-average approach to avoiding traffic. Seven cities were selected, six in Europe and one in North America.

The second part of the study was a comparison, based on models and scenarios, of spatial development strategies for urban regions.

The third element was an examination of how planning at the local level can help to reduce car ownership and motor traffic. German communities with more than 50,000 inhabitants were surveyed on urban planning projects which appear to reduce the volume of road traffic.

Fourth, a neighbourhood model was used to illustrate the town-planning potential of mixed use development and building and road structures designed to minimize traffic flows.

Fifth, spatial planning strategy recommendations were formulated for the region, the core city and urban districts, based on the example of a medium-sized city.

The final part of the study deals with the regulatory instruments available for managing and influencing the development of human settlements and travel patterns, notably laws, other standards and financial incentives which set the framework in which local authorities operate.

Main Results

The case studies devoted to different urban development strategies indicate that the cities selected have indeed seriously addressed the issue of traffic avoidance through improved urban structures and better spatial planning since the eighties and have also implemented relevant ideas in some cases. The following are essential conditions for avoiding motor traffic:

retention of traditional neighbourhoods with desirable urban qualities, specifically reduction of pressures to change neighbourhoods with a moderate settlement density and mixed land use, with streetscapes offering a pleasant environment for outdoor activities, limited motor traffic, etc.,

attempts to improve the spatial mix of urban uses, particularly to reduce the concentration of employment in the core city by increasing residential development, above all in the city centre,

efforts to achieve higher building densities and concentrate mixed uses while improving urban development and the standard of environment,

concentration of settlements on city sites and around public transport nodes,

reduction in vehicular traffic and the number of motor vehicles. Traffic abatement, giving priority to pedestrians, cyclists and public transport,

maintenance of a greenbelt around the city,

concentration of settlements in the region on towns and villages which are well served by local amenities and are accessible by public transport.

The cities examined in the case studies had at least begun to implement many of these policies to reduce traffic volumes. Almost all of them have retained older neighbourhoods with "non-motorized" structures. The analyses and urban comparisons indicate that a positive impact on the ecological and traffic situation can indeed be observed in these cities. Some of the cities in the case studies were shown to exhibit a smaller built-up area per inhabitant, a lower rate of car ownership, less car travel and a lower mileage rate per resident. This confirms the assumptions which led us to select these cities. Comparisons of the urban regions (and not only the core cities), while less conclusive due to the lack of exhaustive data, point in the same direction.

Recommendations for Settlement Structures

The principle recommended for the development of the settlement structure can be summed up as "compact cities and protected landscapes". It is based on a region with a medium-sized city and encompasses the following elements:

The most important strategy is strictly minimizing further suburbanization. Development should generally focus on in-town sites, particularly in the regional centre and satellite towns.

The dominance of employment in the core city as compared with the environs means that new residential developments should be concentrated on the core city, and the inner city wherever possible, leading to mixed uses and higher building density.

Places of work, and particularly new office buildings, should be located mainly at existing or future public transport nodes on the outskirts or the edge of the city. This helps to bring homes and jobs closer together. Ideally, places of work should be accessible by bicycle and linked by a frequent public transport service with the core city and the region.

Increasing the density of development on the edge of town and introducing mixed residential and occupational uses provides a basis for improving the provision of local facilities of all kinds and can thus give communities on the urban fringe a certain self-sufficiency, helping or inducing local residents to focus more on their own district or borough. This in turn has a positive impact on traffic patterns (more cycling and walking).

Building outside the core city should likewise concentrate on in-town city developments, particularly in the satellite towns, and on zones within a radius of not more than 300 to 500 metres around local railway stations. The strict minimization of additional construction on open spaces in smaller communities and outside railway station zones generally is the most important way to reduce traffic volumes and sustain regional development.

This scenario assumes "urbanization" of the city along ecological lines, allowing higher building densities to be achieved and experienced in a quality urban environment. This entails preserving and carefully restoring streetscapes which have retained their "urban" features, consistent traffic calming and reducing the number of private cars.

The following are positive examples of such strategies in practice:

- the balanced mix of uses in central Amsterdam,
- the arrangement of centres along a circular metro route in Amsterdam,
- the site planning strategy developed in the Netherlands, which locates places of work and central facilities within easy reach of public transport,

the transport system in the town of Delft, which accords priority to modes of transport that relieve urban stress, notably the regular use of cycles for approx. 40 per cent of all weekday journeys by local residents,
the concentration of settlements around railway stations in the Bern region,
strict limitation of motor vehicles from large parts of the city to protect historic buildings and preserve landscape features in Oxford,
the moves to reurbanize a car-oriented settlement pattern by opening new light railway lines in Portland, Oregon (USA).

The Need to Reform the Regulatory Framework

Alongside appropriate spatial planning strategies in cities and urban regions, government policy must be reformed to provide a framework which no longer discourages but promotes sustainable development of settlements and traffic flows. Governments continue to grant extensive support for car-friendly, disperse settlement patterns on the edge of conurbations, although these are anything but "sustainable". Incentives for new owner-occupied properties, business support programmes, road construction, mileage allowances and other forms of tax relief consume public funds running into many billions of DM every year.

A concentration of public subsidies on space-saving projects and on accepted regional development sites served by public transport, sufficiently high taxation of built land uses in previously open spaces and a general change of direction in transport policy are the most important regulatory reforms. These can be supplemented by the strategies described above for cities and urban regions, paving the way for sustainable development patterns which reduce the need to travel.

Guidelines to Local Agenda 21 - Literature, Institutions.

Wegweiser "Lokale Agenda 21" - Literatur, Ansprechpartner.
1997. Umweltbundesamt, Berlin.

There is now an almost endless range of reports and publications available on the subjects of "Local Agenda 21" and "Sustainable Development in the Local Districts". The guideline "Local Agenda 21" - Literature, Institutions - developed by the Federal Ministry of the Environment in conjunction with the Federal Environmental Agency, provides local authorities and other actors with "local" information on manuals, guidelines and tips that offer help in the implementation of targets in specific, technical measures and projects (in the areas of urban planning, climate protection, traffic influencing, energy-saving amongst others). A number of current guiding themes on the subject of "Residential Development / Local Environmental Planning" from R&D projects of the Federal Environmental Agency are stated here as examples:

- Environmental protection in land-use planning
- Environmental protection in local development planning
- Planning provision for compensation and replacement in urban land-use plans
- Compact, mobile, urban city development concepts for traffic prevention as an international comparison
- Environmental contribution towards regional planning for the Island of Ruegen (example of overall environmental development on the district level)
- Guiding theme for ecologically-orientated construction
- Guideline and topic-related publications within the framework of the project entitled "Information and Advice for Local Environmental Protection".

The guiding themes were produced in close cooperation with local practices and provide key bases for a comprehensive strategy of sustainability.

Publications which cover a number of topics are listed separately in the guideline. As an introduction, the guideline also states the most important international and national declarations and programmes that have to be taken into consideration for sustainable development on a local and regional level. The guideline is rounded off by references to information sheets and institutions.

The guideline makes no claim to be complete. Part of it contains reference to existing literature lists. Because of the increasing demand for information material, importance was attached to compiling a list of literature quickly. Specifically, the list covers publications available from technical publishing companies and series of works, technical reports as well as magazine articles as well as research programmes.

Alongside research projects, workshop and working aids, the guideline is a further "building block" for the promotion of Local Agenda 21 processes by central government. At the same time, it contributes towards creating a topic-related link between the implementation processes of the 1992 "Environment and Development Earth Summit" in Rio de Janeiro (UNCED) and the 1996 "Settlement Summit" in Istanbul (HABITAT II).

The guideline can be obtained free of charge from the Central Answering Service of the Federal Environmental Agency.

Regional Planning and its Importance in the Context of Sustainable Development.

Zum Stellenwert der Regionalplanung in der nachhaltigen Entwicklung.
Umweltbundesamt, Fachgebiet Raumbezogene Umweltplanung; 1997.
UBA-TEXTE 31/97; Umweltbundesamt, Berlin.

With the help of six steps, it is possible to show what spatial planning can do for a sustainable development. Looking for possibilities to be able to spare the environment as well as the resources, the spatial structures, the settlement structures, the areas and locations are discussed mainly.

The regional planning, which is in the centre of attention, mediates between sectoral planning and urban land use planning.

The planning at governmental level is one of the main topics in the essay. Furthermore, the spatial development of urban and rural areas are presented and discussed.

Summary Reports on Research and Development Projects in Environmental Planning.

Kurzberichte der raumbezogenen Umweltplanung und des kommunalen Umweltschutzes.
Umweltbundesamt, Fachgebiet Raumbezogene Umweltplanung; 1997.
UBA-TEXTE 55/97; Umweltbundesamt, Berlin.

This publication presents the results and analyses of research and development projects in summary form as well as other activities which are supported and carried out in the section of "Spatial Planning and Environment" of the Federal Environmental Agency.

The results of the research and development projects do not always have to reflect the views of the client. The range of topics presented simultaneously provides an outline of the

contents of the environmental planning and puts these into concrete terms. Other tasks in this area which up to now have had to be left undone will form part of our future work and be reflected in a further addition to this documentation. The publication is intended to both provide interested specialists with access to the results of the research and development work and to serve as a basis for the current discussion in the Federal Environmental Agency. Environmentally-orientated spatial planning is characteristically an interdisciplinary orientated task. In this context, account must be taken both of medical environmental aspects as well as other technical tasks of an interdisciplinary orientated nature. This publication is aimed at simplifying the communication required.

Those who wish to go into further detail on the research and development projects are referred to the relevant publications.

Express reference is made to the fact that the summary reports are fundamentally drawn up when the work is completed; the year of publication is therefore always stated at the beginning under the heading in order to place the report within the proper chronological context. Presentations of specific facts, the wording of legislation etc. always refer to this date and no longer necessarily applies today.

Supporting the Local Agenda 21 Process in Germany.

Förderung und Begleitung des Lokalen Agenda 21-Prozesses in Deutschland.
Presseinformation des Umweltbundesamtes Nr. 20/97; Umwelt 6/97 - Eine Information des Bundesumweltministeriums.

Numerous towns and cities in Germany want to implement the resolutions of the 1992 UN Conference on Environment and Development in Rio de Janeiro for the purpose of sustainable, environmentally-friendly development. Five years ago, 178 nations agreed the Agenda 21, a global action programme for the 21st century. The towns and cities, in particular, were called on in this respect to implement this worldwide unique concept. In Germany, the content-related emphases are on the areas of energy and climate protection, transport, nature and landscape conservation as well as construction and land use. In order to combine these diverse activities of the action programme and structure them on a more effective basis, the Federal Environmental Agency awarded the research project entitled "Environmental Effectiveness of Local Agenda 21 Plans" to the International Council for Local Environmental Initiatives (ICLEI) in 1998. Status after one year: according to the ICLEI, there are currently initiatives for a Local Agenda to be found in approximately 100 towns and cities. A large number of these local authorities have joined forces under the motto of "Strength in numbers" to form a network and exchange information at regular workshops. The aim is for these experiences to lead to the production of a practically-based guideline when the project is completed in June 1998, aimed at helping the local authorities more readily solve problems on a local basis.

At the Special General Assembly of the United Nations which ended on the 27 June 1997 in New York, the Agenda 21 was also up for review five years after the Earth Summit in Rio de Janeiro. Chapter 28 of Agenda 21 calls on "all local authorities to enter into dialogue with their citizens, local organizations and the private sector and to agree a Local Agenda 21".

The environmental and development problems in the towns, cities and local authorities are considerable. These areas are not only places where large numbers of people live together within a confined space but also where goods production and the turnover of energy and materials is concentrated, land is used on a particularly intensive basis. The general concept of sustainable development offers the opportunity to counter these problems through a joint approach to social, economic and ecological aspects.

In this context, many German cities and districts are able to call on a large fund of experience. Over the last 20 years themselves, environmental protection has been a key element: local politics and planning, development planning, landscape planning, urban development concepts, environmental quality reports and numerous other measures can serve as building blocks for a comprehensive concept of sustainability. As such, the German local authorities are by no means just starting out on their route towards a Local Agenda 21.

The research project entitled "Environmental Effectiveness of Local Agenda 21 Plans" concentrates the current and planned activities in Germany. Information and experience is exchanged through workshops, circulars and topic sheets, numerous local authorities have joined forces to create a network. This approach is intended to structure the implementation process for the Local Agenda on a more effective basis.

In parallel with this, an Advisory Council was set up in the autumn of 1998. The federal government, local authority associations and institutions, non-governmental organizations such as environmental protection organizations, as well as federal authorities and cities acting in a pioneering capacity, work together on this committee which monitors and supports the "Local Agenda 21 Process" in Germany.

Represented on the committee, for example, in addition to the Federal Environmental Agency, are the Federal Ministry of the Environment, the Federation Research Institute for Regional Geography and Regional Planning, the Association of German Cities and Towns and the Centre for Local Development Cooperation.

The following factors have emerged from the discussions to date as being vital to the success of a Local Agenda 21:

Environmental protection and urban development must be combined under the new policy model of sustainability.

The phases of the process must be clearly structured in terms of content and periods, activities and responsibilities must be recorded as resolutions.

Indicators and benchmarks for evaluating measures and monitoring whether and to what extent targets have been achieved, must be formulated.

Senior persons from local government and political opinion-formers should support the process on a broad level.

Citizens and local groups should play an active part through forums and targeted public relations work.

Financial support for model projects and the corresponding personnel - at least, during the start-up phase - would also be helpful.

The Environmental Contribution to the Regional Planning of the Rügen Island.

Umweltbeitrag zur Regionalplanung für die Insel Rügen.

Arbeitsgemeinschaft: Arbeitsgruppe für regionale Struktur- und Umweltforschung GmbH und NWP Planungsgesellschaft mbH; 1995. UBA-TEXTE 28/97; Umweltbundesamt, Berlin.

Rügen is intended to provide a model landscape for environmental development in which the traditional conflicts between land conservation and land use are minimized. In order to achieve this objective, the Arbeitsgruppe für regionale Struktur- und Umweltforschung and Nord West Plan, Oldenburg produced the "Environmental Contribution to the Regional Planning of the Island of Rügen" on behalf of the Federal Environmental Agency and in collaboration with the rural district of Rügen. As a "guiding plan for area related environmental development", with targets in text and map form, it is an important decision-

making aid for those responsible for planning to enable the interests of environmental and nature conservation to be taken comprehensively into account at an early stage on questions relating to land and locations. This shows conservation areas of differing degrees of importance for the flora and fauna as well as for all other environmental factors such as for example soil, water and air/climate. Environmental requirements made on the land users, such as housing, tourism and transport, are also formulated. Urban sprawl on landscape areas must be counteracted, for example, by meeting the demand for building land on areas within the residential area and by rounding off the local boundaries.

Particular mention must be made of the "activity density in the open landscape" ascertained, as an indicator of measures required for the long-term safeguarding of a high quality environment in the individual areas of Ruegen. In 1992, for example, the activity density (average burden during the summer months) on Hiddensee was 6.7 persons per hectare because of the numerous day visitors, a figure which equates approximately to the activity density in the surrounding area of Hamburg. We are clearly seeing that a high level of environmental quality here can only be ensured if access by visitors is controlled or restricted by specific measures.

In view of the economic and social challenges on the Island of Ruegen, a particularly careful approach to development controls is required. The island's assets, the environmental resources and the wonderful diversity, uniqueness and beauty of the landscape, must be taken into consideration in this respect. The "environmental contribution" is therefore an initial but important step for permanent, environmentally-compatible regional development on Ruegen, simultaneously providing the basis for specific measures relevant to environmental protection and nature conservation.

Within the framework of the concluding event to celebrate the European Year of Nature Conservation on 15 December 1995, the Federal Minister of the Environment, Dr. Angela Merkel, awarded the "environmental contribution" the Certificate of the Federal President for the "Project of the Month". The "environmental contribution" does particular justice to the motto of the Year of Nature Conservation: "Nature conservation outside protected areas: Design the future - Preserve nature". It does not relate first and foremost to the existing designated conservation areas on Ruegen Island, but instead to the areas in which conflict is created between transport, tourism, residential development and coastal protection on the one side and the environment on the other.

The aim is for these areas to be developed in such a way that Ruegen and Hiddensee will continue overall to maintain a consistent and environmentally compatible regional structure. The environmental contribution is therefore not a plan designed to create obstacles but instead to provide clarity on the environmental aspect and open up freedom for development. The first elements of the "environmental master plan" defined in the expert draft report for the Environmental Civil Code - General Section - are used here as a model. The task of the local district is to now incorporate the interests of environmental protection into the local district development plan, taking into account other technical interests. At the same time, the results and applicable recommendations of the environmental contribution should motivate other districts and regions to introduce a programme of environmentally-friendly development.

In addition, the Federal Environmental Agency published a brochure contained selected results of the research project for the concluding event of the European Year of Nature Conservation, 1995. The brochure can be found in the library of the Federal Environmental Agency.

The Environmental Contribution on Regional Planning for the Ruegen Island

Sequence of the Process Steps

Survey

- Fauna, flora, habitats
- Soil, water, climate
- Humans: quality of life/landscape structure

Development of a model as an evaluation benchmark in accordance with the principle of sustainability

Assessment of the Environmental Situation

Master Plan for the Spatial Environmental Development

- Determining the environmental targets
- Determining conservation and development areas
- Compatibility of uses / determining threshold levels

Versions of Environment as a Decision-making Instrument

- Optimizing environmental planning (master plan)
- Environmental planning to protect stocks

Recommendations on How to Proceed Further

Discussion on Policy Model

Incorporation of the Environmental Contribution into the District Development Plan

Human Activity
in the Region

Guidelines to Ecologically Orientated Construction.

Leitfaden zum ökologisch orientierten Bauen (3. Auflage).
Umweltbundesamt; 1997. C.F. Müller Verlag Heidelberg, ISBN 3-7880-7521-X.

Every construction project has consequences for the environment and entails the need for and use of natural resources. The creation of residential settlements, the construction and use of homes leads to open spaces being sealed and to the production of waste and sewage. The volume of materials and energy used per inhabitant has multiplied tenfold this century. There has been an increase in noise and in the consequences of concentration, air pollution and waste heat have contributed towards a change in the urban climate.

Ever increasing importance is being attached to improving the environmental situation as well as the quality of life and homes. Ecologically-orientated construction now plays a key role in the planning and policy of the local authorities, particularly in the areas of urban planning/development, transport, energy, waste, water supply and sewage disposal. There is a considerable demand for information and clarification identified amongst developers and individuals in the private sector, architects, engineers, skilled tradesmen and landlords as well as in the competent local authorities.

This guideline offers these engaged in construction a guideline and planning aid for the main elements and technologies of ecologically-orientated construction. In addition to basic information on planning, including possible stipulations by cities and districts in development plans such as, e.g. outline of the plots, location or orientation of the buildings, the obligation in respect of rainwater seepage on the site or a solution for seepage covering all sites and the entire development plan, information and practical tips are provided on construction-related topics:

- Building materials
- Energy balance and climate systems
- Water supply and disposal
- Waste recycling and disposal
- Noise protection
- Measures aimed at improving the residential environment
- Lighting

In addition, the guideline gives a presentation of the costs of ecologically-orientated construction or the anticipated cost savings through the reduced consumption of valuable resources, as well as existing development opportunities and legal requirements of the Länder. References to literature and a list of addresses provide for more detailed information on special questions relating to ecologically-orientated construction.

Regional Conference on Environmental Protection. A Hungarian - German Cooperation Project.

Fachkolloquium "Umweltschutz und Raumordnung" am 19.09. und 20.09.1994 in Budapest.
Regionalkonferenz "Umweltanalyse und -planung im Komitat Pest" am 21.09.1994 in Budapest.
D. Grünnewig, A. Hoppenstedt, E. Török; 1995. UBA-TEXTE 11/96; Umweltbundesamt, Berlin.

The report documents major subjects discussed at a regional conference on environmental protection and spatial planning held in Budapest from 19 to 21 September 1994.

Integration of environmental protection into regional spatial planning was a main issue. Hungarian and German environmental planners (from science and practice) discussed land development and the feasibility of transferring planning know-how from Germany to special sites in Hungary. Main subjects were housing development, landscape development and protection of natural resources, e.g. water provisions. Steps for planning cooperation were listed in highly populated areas, using Berlin, Vienna, Budapest and Leipzig as examples.

Concrete environment planning steps were discussed on the third day for the region of Pest which lies in central Hungary, in the vicinity of Budapest. The basis for this was presentation and discussion of results from the regional conference from the research and development project on "Environmental analysis and planning in the comitat Pest". Participants were mostly representatives from communal, regional and local authorities.

Environmental-Sound Transfer of Know-how and of Technology to the County of Pest (Hungary) on an Integrated Environmental Analysis and Environmental Planning for the Entire Territory.
Umweltschutzorientierter Wissens- und Technologietransfer in das Komitat Pest (Ungarn) auf der Grundlage einer gesamtträumlichen Umweltanalyse/-planung.
Akademie für Kommunalen Umweltschutz (AKU), Osnabrück-Georgsmarienhütte; Planungsgruppe Ökologie + Umwelt, Hannover. Abschlussbericht, Juni 1994.

As basis for an environmentally-sound transfer of know-how and technology to the county of Pest, a comprehensive environmental analysis was carried out for the entire territory of the county and recommendations for action designed to improve the environmental situation in the area covered by the study formulated. The experience, in terms of content and methods, offered by the environmental resp. landscape (outline) planning and the comprehensive range of environmental reports in Germany was utilized for this purpose and applied to the special framework conditions applicable in Hungary.

A detailed overview of the legal and administrative framework conditions as well as the economic control instruments in Hungary resp. the county of Pest in the area of environmental protection, is given in the first part of the report. Particular acknowledgement was given to the special position of the local authorities after years of very limited independence and the official structure as well as legal standards, relevant to the environmentally technical aspects, are explained in detail.

The comprehensive environmental analysis in text and map form, divided into the subjects "quality of living and recreation", "soil", "water" and "habitats", illustrates the picture of a region which is characterized to a considerable extent by the conurbation area of Budapest - the city itself is not a part of the county from the administrative aspect but is nevertheless located in the heart of the country - a county that stretches along the Danube and reaches as far as the bend in the Donau. Together with the adjacent mountain regions and large areas of the plains located in the South East, the territory of the county also covers areas of a rural nature which are disadvantaged in terms of economy and infrastructure and even large rural areas located relatively further afield.

Apart from a few exceptions, there are major environmental problems throughout the area covered by the study with regards to sewage disposal, waste disposal, protection of the waterways and clean water, air quality, soil protection as well as residential development (land use, urban sprawl). With the help of a survey of the regional sensitivity covering the entire area, individual areas at special risk and areas forming the focus of conflicts and for which priority action recommendations are being formulated, are ascertained and ringfenced. The method concept is based on the ecological risk analysis.

The final recommendations for action are subdivided into:

fundamental requirements and action priorities based on the most important uses which place demands on the environment,
individual measures requiring priority action in terms of area and time and
recommendations for joint action by Budapest and the county of Pest.

The report is supplemented by a summary of the national and international financing options for environmental protection methods.

Joint Projects on the Environment within the Framework of Town Partnerships - A Contribution to Implement Agenda 21 on the Local Level.

Gemeinsame Umweltschutz-Projekte im Rahmen von Städtepartnerschaften - ein Beitrag zur Umsetzung der Agenda 21 auf kommunaler Ebene.

Institut für europäische Partnerschaften und internationale Zusammenarbeit e.V. (IPZ); 1996. Bonn.

The Agenda 21, agreed at the UN Conference for Environment and Development (UNCED) in Rio de Janeiro in 1992, assigns in Chapter 28 a key role to the local authorities in the task of resolving the global and regional environmental problems and in the realization of sustainable development. In this context, the exchange of information and experience, mutual technical help between the local authorities and carrying out joint projects, particularly within the framework of town partnerships, are key measures designed to strengthen the ability of local authorities to act. There is particular interest on the part of federal government in providing support for the agenda process on a local level.

With financial assistance from the Federal Ministry of the Environment, the Institute for European Partnerships and International Cooperation (IPZ), Bonn, published a collection of examples and materials under the heading of "Joint Projects on the Environment within the Framework of Town Partnerships", on behalf of the Federal Environmental Agency. The main elements of the publication are the results of a survey of cities and organizations on partnership projects and the documentation of a colloquium staged at the end of 1995 in Kassel.

Knowledge of the following experiences (selection) is passed on against the background of the exchange of information and experience in Kassel - representatives from science and local government, local planning practice and environmental associations took part in the event:

The provision of translated aids and glossaries makes a major contribution towards overcoming language barriers and problems of understanding.

A transfer of information and know-how should always be demand-driven and take into account the special conditions in the "recipient country".

Model trials and sample projects should be analyzed with greater emphasis on their applicability to other towns and cities.

Initiatives from non-governmental organizations (NGOs) should be incorporated when carrying out projects.

The personal responsibility of local authority initiatives should not be put in question despite the need for government support.

Partnership projects must remain transparent (reduction in their complexity).

City partnership projects should be included in a Local Agenda 21 process and used for more effective planning and implementation.

The range of information provided by networks should be available to all interested cities.

This publication, together with numerous references to institutions and support opportunities, can be obtained from the Institute for European Partnerships and International Cooperation (IPZ), P.O. Box 33 01 07, 53203 Bonn, Germany.

Provision for Compensation and Replacement in Local Development Plans.

Planerische Vorsorge für Ausgleich und Ersatz in Bauleitplänen.

L. Preisler-Holl, K. Ammermann et al.; Deutsches Institut für Urbanistik (difu); 1996. Berlin, ISBN 3-88118-212-8 and ISBN 3-88118-207-1.

Since amended provisions governing environmental impacts were introduced in local development planning in May 1993 (Sections 8a - 8c, Federal Nature Conservation Act), steps to avoid impairment of nature and the landscape or, where this is not possible, to provide compensation and replacement, must now be definitively adopted at the master planning stage. Previously these steps were taken when a specific application was made for building permission.

The present study seeks to gauge the impact of these new provisions on local planning practice and makes suggestions to facilitate their implementation. Case studies are used to illustrate typical problems raised by the new provisions and to propose suitable solutions for such problems.

The study took in a total of 33 examples from 20 towns and communities in 12 federal states, or Länder. It sought

- (a) to shed light on how the new provisions are handled at the final, binding stage of local master planning,
- (b) to analyse case studies from the domain of preparatory master planning, and
- (c) to reveal how the provisions are enforced and what steps are taken in relevant instances to guarantee compensation.

Recommendations are made to expedite implementation of the provisions at each of these three levels by local government. Proposals are advanced to introduce complementary instruments in local planning practice, to refine and standardize practice at the Länder level, and to provide legislative clarification and supplementation at the federal level.

All in all, it may be concluded that the new provisions do not constitute a departure from previous planning practice. But they do call for modifications to procedures followed in the past, depending on the experience gathered by specific Länder in handling the intervention provisions within the context of master planning.

Since the provisions became law, local landscape planning has generally come to play a tangibly greater part in master planning. While the details differ from one Land to another, all of the communities examined have begun, as intended by the provisions, to integrate local landscape planning with master planning. This conclusion, however, applies only to the cases studies, which cannot claim to be representative for the Federal Republic of Germany as a whole.

The revision of the Federal Nature Conservation Act does not resolve the conflict between the need to ensure proper growth of human settlements on the one hand and to protect

nature and the landscape on the other. But it does give greater prominence to the concerns of nature protection and landscape conservation. It is also apparent that nature and the landscape are no longer regarded simply as potential sites for building development but, increasingly, also as possible compensation areas. And the very fact that the compensation requirement increases in proportion to the new sites earmarked for human settlement means that, in some cases at least, there has been a greater reluctance to sanction construction in presently undeveloped areas.

Nature Conservation - Introduction and Guide to Addresses,
Periodicals, Literature.

Naturschutz - Einführung und Wegweiser zu Adressen, Zeitschriften, Literatur;
Umweltberatung für Kommunen.

T. Ranneberg, S. Stern, A. Brockmann; Deutsches Institut für Urbanistik (difu); 1996. Berlin, ISBN 3-88118-205-5.

The new Länder offer expansive, unique areas hosting a potentially natural environment. On the other hand, there are also landscapes that are devastated to a large extent and cannot be restored in the original form. The protection and preservation of the still available ecologically valuable areas as well as the development of devastated areas call for new strategies of nature protection.

Besides a description of the as-is status, the expert essay shows the possible instruments of nature protection. With the introduction of landscape planning and the intervention regulation there is in addition to the classical nature protection instrument of designating protection areas also in the new Länder the possibility to develop landscape, to use the principle of precautionary action in nature protection and to consider the polluter-pays-principle.

The guideline "Nature Protection" is another volume in the series "Documentation of Selected Literature on the Environment" which, above all, is to provide information for those working in administration.

Besides an introducing expert essay commenting on this problem and on the state of the development with regard to the new Länder, the documentation contains:

addresses of important contacts for nature protection problems,

addresses of organizers of advanced training courses, meetings and seminars on nature protection,

indications on important magazines regularly informing about nature protection,

guides to literature on the topic nature protection including an overview of general literature, theoretical bases and research works classified according to main points as well as of special literature published in the Länder and at local level.

Guidelines and Development Objectives for the Environmentally
Favourable Regional Development of the Saxonian/Bohemian
Erzgebirge - A Contribution to Regional Policy.

Leitlinien und Entwicklungsziele zur umweltschonenden Raumentwicklung des sächsisch-böhmischen Erzgebirges - ein Beitrag zur Regionalplanung.

Institut für Stadtforschung und Strukturpolitik, Institut für ökologische Raumentwicklung, Arbeitsgemeinschaft Hana/Mundil; 1995. Kostenlos im Institut für Stadtforschung und Strukturpolitik GmbH erhältlich, Berlin.

For the first time, a study incorporating all aspects of an environmentally favourable regional development has been conducted for the Saxonian and Bohemian regions of the Erzgebirge. For the sectors economy, settlement development, traffic, air/climate, energy, water supply, sewage disposal, soil conservation, refuse management, nature conservation, landscape protection, agriculture, forestry and tourism comprehensive assessment of the environmental situation and critical evaluations of current projects were carried out.

On this basis, guidelines and development objectives as well as scenarios for environmental improvement on a regional level were set up. A list comprising 239 short, medium and long-term measures concludes the study. An 80 page summary is being submitted as well.

Glossary of Environmental Planning.

Glossar der raumbezogenen Umweltplanung.
W. Hülsmann, B. Locher u.a.; Umweltbundesamt, Berlin; 1995.

The present publication is the "Glossar der raumbezogenen Umweltplanung". It represents an attempt to respond to the numerous issues which have arisen in the course of environmental planning work. The terms are explained as concisely as possible and shed light on the work of environmental planners. For the most part, they are taken from the fields of planning law, environmental studies and public administration, with some touch on the natural sciences and technology. The glossary is intended to facilitate communication between environmental planners and specialists in related fields. The glossary is also available in English, Spanish and Hungarian.

Environment-friendly Modes in Local Traffic. Potentials for Reduction by an Integrated Promotion of Environmental-friendly Means of Transport Including a Consideration of Tramways.

Umweltverbund im Nahverkehr. Entlastungspotentiale durch eine integrierte Förderung umweltschonender Verkehrssysteme unter Berücksichtigung der Straßenbahn.
W. Brög, S. Bobinger, E. Erl; SOCIALDATA Institut für Verkehrs- und Infrastrukturforschung GmbH München; 1993. UBA-TEXTE 62/94; Umweltbundesamt, Berlin.

The study examines aspects of mobility in Cottbus and Rostock (two towns in the former GDR). It shows a comparison between the real behaviour and the estimation of this behaviour of the citizens of the two towns. Furthermore, the opinions of the citizens on the subjects traffic and environment will be analysed.

On the basis of the figures of the mobility behaviour, which were surveyed in 1992, scenarios for the modal choice in the year 2000 in the two towns are drawn up. There is a distinction between a scenario following the actual trend, a scenario with an integrated promotion of environment-friendly modes - foot, bicycle and public transport. The scenarios are compared and each pollutant emissions caused by private transport are calculated. The scenario supporting the environment-friendly modes is the only one achieving a reduction of the CO₂ emissions.

The individual reasons for modal choice show the potentials for a behavioural change. These large potentials are analysed and quantified dependent on the measures at the level of planning as well as on measures on the level of information and communication.

Guidelines on the Establishment of a Tree Inventory.

Leitfaden zum Aufbau eines Baumkatasters.

R. Semmler; Deutsches Institut für Urbanistik (difu); 1994.

difu-Schriftenreihe, Berlin.

On the basis of practical experience and requirements of the municipalities, the guideline offers feasible suggestions and solutions for the recording and administration of tree population in urban settlements. In doing so, the main aim is to develop a uniform recording system and computer-aided administration of tree population.

Different labelling and numeration methods as well as visual and technical methods on the determination of the condition and vitality of trees and also uniform recording categories and definitions are presented, which allow an evaluation of the data material and make the assessments on the different trees and sites compatible.

Moreover, for establishing a tree inventory in urban settlements which differs from the evaluation of trees made in the forest damage survey, the guideline is concerned with the situation of the legal determinations covered by tree protection statutes and ordinances as well as with questions of the duty to safeguard traffic.

Orientated to the actual possibilities of the local authority, the publication also deals with questions of labour and materials costs required in the administration of the urban tree population.

Therefore, tree inspections to be performed once or twice a year to control the traffic safety require high expenditure on labour and subsequently high costs. Financial recourses are especially lacking in the new Länder to competently perform tree controls, although, in particular there, the large stock of old trees would require a stronger control. The possible materials and personnel damages arising due to falling trees and dead wood bear no relation to the costs accruing for competent precautionary measures.

The guideline is supplemented by a list of abbreviations of selected genera and species of trees and by a glossary which contains and defines special terms on the vitality determination in alphabetic order.

Environment Atlas - Guideline with Practical Examples for the Preparation of Local Authority Environment Atlases.

Umweltatlas - Leitfaden mit Praxisbeispielen für die Erarbeitung kommunaler Umweltatlanten.

K.-H. Fiebig, G. Ohligschläger; Deutsches Institut für Urbanistik (difu); 1994.

difu-Schriftenreihe, Berlin.

Task of the guideline "Environment Atlas" is to give methodical guidance for the presentation of special environmental data on geographic maps. The main structure for an environment atlas is to be offered to the local environmental authorities which enables them to select significant environmental information and to evaluate the ecological situation and to

effectively present the cross-sectoral tasks of environmental protection within the administration, in the cooperation with neighbouring municipalities and in the public.

The publication "Environment Atlas", which is divided into special topics, gives methodical indications on the set-up and development of an environment atlas and shows practical examples on presentation and mapping. The selection of topics is concentrated towards a presentation of the as-is status, in particular, towards a description and analysis of the natural conditions and a determination and evaluation of available impacts.

The proposed content of an environment atlas contains the special areas

- use structure (including energy supply and waste management),
- nature and landscape,
- soil,
- water,
- air and climate,
- noise.

Due to the predominantly spatial presentations, the atlas is above all a working instrument to be used for examining and evaluating the developments, plans and projects facing us with regard to the present situation and the associated potential, environment-related effects and for formulating the relevant requirements and alternatives.

Water Protection - Introduction and Guide to Addresses, Periodicals, Literature.

Gewässerschutz - Einführung und Wegweiser zu Adressen, Zeitschriften, Literatur.
M. Böhme, A. Brockmann; Deutsches Institut für Urbanistik (difu); 1994.
difu-Schriftenreihe, Berlin.

The expert essay on the guideline primarily deals with the presentation of the water resource and its protection. Besides an evaluation of the as-is status and a description of the main causes of water pollution, solutions to approach water pollution control at local authority level are shown. The aim to reach in the long term is to obtain natural water and thus to ensure the supply with the vital food "water".

The guideline "Water Protection" is another volume in the series "Documentation of Selected Literature on the Environment" which, above all, is to provide information for those working in administration.

Besides an introducing expert essay commenting on this problem and on the state of the development with regard to the new Länder, the documentation contains:

- addresses of important contacts for water protection problems,

- addresses of organizers of advanced training courses, meetings and seminars on water protection,

- indications on important magazines regularly informing about water protection,

- guides to literature on the topic water protection including an overview of general literature, theoretical bases and research works classified according to main points as well as of special literature published in the Länder and at local level.

Environmental Efficiency of Restitution and Substitution Measures According to § 8 Federal Nature Conservation Act in the Federal Republic of Germany.

Umweltwirksamkeit von Ausgleichs- und Ersatzmaßnahmen nach § 8 Bundesnaturschutzgesetz - Defizite und ergänzender Regelungsbedarf anhand exemplarischer Nachuntersuchungen.
W. Peters, T. Ranneberg; ÖKOplan Gesellschaft für ökologische Planung, Landschaftsarchitektur und Umweltforschung mbH. UBA-BERICHTE 7/93; Erich Schmidt Verlag, Berlin; 1993.

Case study analysis of operations that are effective according to § 8 Federal Conservation Act serve to study the practice and efficiency of the compensatory regulation on project-related environmental impacts with regard to planning process and implementation as well as development and ecological efficacy of restitution and substitution measures. The compensation measures studies comprise seven types of projects (e.g., coastal preservation, overhead cables etc.).

The systematic discussion of deficiencies and problems of planning approaches and implementation leads to proposals how to achieve a higher degree of efficiency concerning accompanying landscape planning, development of project-related controlling and further corresponding measures (rule of landscape planning, fees and similar issues).

The categorization of impacts and compensation is derived as a synopsis of the insights from case study analysis, planning practice and technical literature. It represents a methodological tool for planning and implementing compensatory measures based on resource-related functional co-efficients (criteria standards).

An expert discussion of the study project and of the conclusions drawn is documented in the report.

Study on the Effectiveness of the Protected Landscape (*Landschaftsschutzgebiete*) as an Instrument for Landscape Protection and Suggestions for Improvements from the Ecological Point of View.

Das Landschaftsschutzgebiet als Planungsinstrument eines umfassenden Landschaftsschutzes - Bewertung, Effektivierung, Weiterentwicklung.
H. Langer u.a.; Planungsgruppe Ökologie + Umwelt Hannover. UBA-BERICHTE 6/93; Erich Schmidt Verlag, Berlin; 1993.

The first part of the study analyses the effectiveness of "Landschaftsschutzgebiete (LSG)" as an instrument for landscape protection. A literature review and the analysis of a sample of establishment orders show inadequacies in their implementation and the causes are discussed. Based on these findings, suggestions are made to the improvement of the effectiveness of landscape protection within the current legislative framework.

The second part goes beyond the minimalist consensus. Under the subtitle "Programm Vorbildlandschaft" (Exemplary Landscape Programme) a comprehensive model for landscape protection is proposed. This modified approach contrasts with the aims and objectives of the current Federal Conservation Legislation (BNatSchG). The dual aspects of the environment both as resource for humans and as a habitat for other forms of life, will

have to be reconciled by the way the resources of the cultural landscape are utilized in the future.

The study finishes by documenting the preliminary discussion of the results by a group of experts.

Environmental Law - Special Part (Volume I and II).

Umweltrecht. Fachgesetzlicher Teil.

Band 1: Abfall- und Immissionsschutzrecht

Band 2: Naturschutz und Gewässerschutzrecht.

U. Stöcker, M.J. Henkel; Deutsches Institut für Urbanistik (difu); 1993.

difu-Schriftenreihe, Berlin.

As continuation of the publication "Environmental Law - General Part", explaining the basic principles of environment legislation, the two guidelines "Environment Law - Special Part" are concerned with the main areas of environmental protection, such as Waste and Immission Protection Law (volume I) and Nature Protection and Water Protection Law (volume II).

In the guidelines the legal instruments in their main features are presented by giving consideration to government, Länder and partly EU law. The publications show approaches and possible fields of action at local authority level according to the shaping of Länder law and the particularities to be observed when implementing the law in the new Länder. An evaluation of judicial decisions published so far given in the Annex, offers a comprehensive overview of the latest court rulings. An index of headings facilitates the search for concrete areas of topics.

Guidelines on Local Authority Environmental Sound Procurement.

Leitfaden zur umweltfreundlichen Beschaffung in Kommunen.

C. Welte; Deutsches Institut für Urbanistik (difu); 1993. difu-Schriftenreihe, Berlin.

The topic "Environmental sound procurement" has been discussed by the local governments of the old Länder for many years already. The guideline "Local Authority Environmental Sound Procurement" prepared by order of the Federal Environmental Agency is above all directed towards the local governments of the new Länder responsible for procurement. Comprehensive decisions on the awarding of contracts and on procurement planning have now to be taken in the new federal Länder at local level. In this context, the guideline is intended to provide basic information on an environmental sound procurement as well as practical stimuli and proposals.

The guideline provides stimuli, examples and motivation to make environmental sound procurement more effectively. The aim is to reduce environmental strain by the purchase of environmental sound products and to thus contribute to the protection of air, climate, water, soil and health.

On the basis of experience of especially active municipalities, 15 basic elements for an action concept have been developed which is classified according to the following criteria:

- political requirements and decisions of general principle,
- initiatives from administration,
- information, motivation, advanced training,
- documentation, success control, external communication,

new ways.

Each basic element contains, inter alia, action recommendations for the political representation of a local authority and the administration, partly also for the public in general or for third parties affected.

Local Authority Fees and Contributions in Environmental Protection.

Kommunale Gebühren und Beiträge im Umweltschutz.

R. Costen u.a.; Deutsches Institut für Urbanistik (difu); 1992. difu-Schriftenreihe, Berlin. UBA-TEXTE 17/93; Umweltbundesamt, Berlin.

The guideline has been compiled in cooperation with financial experts at local authority level and shows, against the background of their practical experience, possibilities of solutions illustrated by indications and examples.

Aim of the guideline "Local Authority Fees and Contributions in Environmental Protection" is to describe the main features of the law applicable to fees and contributions and to show the shaping and implementation of financing instruments. In addition, possibilities are shown how to bring environment-relevant aspects to bear in the shaping of contribution or fee rates, especially with regard to waste water and waste fees.

The following topics are dealt with:

Legal bases

Different financing instruments such as fees, contributions, taxes, special charges and their legal bases.

Basic principles of imposing and calculating fees

General principles of the law applicable to fees as well as the local legislative margin of discretion in the shaping of fee rate, especially with regard to waste water and waste fees.

Basic principles of imposing contributions

Main instruments of imposing contributions such as contributions to be paid for connection, development and extension measures as well as financing aspects in the choice between imposing contributions or charges.

Aspects of becoming independent and of privatization with regard to waste water and waste disposal

Organization forms of waste water and waste disposal and calculations as to the privatization of plants with examples.

Environmental Law - General Part.

Umweltrecht. Allgemeiner Teil.

M.J. Henkel; Deutsches Institut für Urbanistik (difu); 1992. difu-Schriftenreihe, Berlin. UBA-TEXTE 16/93; Umweltbundesamt, Berlin.

The guideline "Environmental Law - General Part" is concerned with the bases required to understand environmental legislation. In this way, also non-lawyers are to be provided with a solid knowledge which facilitates the access to the manifold of special laws of environmental

legislation and increases the understanding for the interrelations of this largely new legal action.

The guideline describes the most important regulations of German environment law; main emphasis is put on those regulations which are of particular interest at the local authority level. In addition, the several special statuses to be observed in the new Länder due to the unification treaty are explained in detail.

The following topics are dealt with:

creation and development of modern environmental law,
basic principles of environmental protection,
legal sources (EU law, federal law, land law, *lex loci*),
regulation requirements and procedural instruments,
administrative procedures and administrative enforcement,
environmental impact assessment,
legal protection issues,
competence regulations and administrative organization.

By means of several overviews and examples, the attempt is made to systematically arrange the complex field of law. In addition, indications on several judicial decisions and latest publications are given. The guideline is supplemented by a list of addresses of the most important institutions dealing with environmental protection and by an index of headings to facilitate the reader the access to information.

Introduction into Budget Law for Staff Members in Environmental Authorities at Local Level.

Einführung in das Haushaltswesen für Mitarbeiter in den kommunalen Umweltämtern.
H. Reidenbach; Deutsches Institut für Urbanistik (difu); 1992. difu-Schriftenreihe,
Berlin. UBA-TEXTE 15/93; Umweltbundesamt, Berlin.

This guideline is primarily intended for staff members of environmental authorities at local level. Its aim is to show the main terms and principles of municipal budget law and to provide the requirements of implementing budget law in routine work.

The following topics are dealt with in the publication:

Presentation of budget systematics

The guide first gives an overview of the main terms of municipal budget as well as of the status of environmental protection in budget systematics.

Budget provisions

Taking the example of the Free State Saxony, it is shown which relevant laws and ordinances under budget legislation are of importance for preparing the budget.

Budget and financial planning

The main principles of preparing the budget as well as the bases of financial planning are described and illustrated with extracts from the budget.

Procedures and tasks in the preparation of the budget

The procedural steps when preparing the budget are described by a flow chart and the amount of the appropriations in the budget of environmental authorities for 1991 shown using the example of 20 West German environmental authorities.

Instruments for implementation of budget

Finally, a brief overview of the most important instruments for implementing budget is given.

Waste Management - Introduction and Guide to Addresses,
Periodicals, Literature.

Abfallwirtschaft - Einführung und Wegweiser zu Adressen, Zeitschriften, Literatur.

D. Castro, C. Rösler; Deutsches Institut für Urbanistik (difu); 1992. difu-Schriftenreihe, Berlin. UBA-TEXTE 14/93; Umweltbundesamt, Berlin.

In the new Länder, after the reunification of the two German states the administrative preconditions required for waste management had to be created first of all. Since 1 January 1991, all ordinances and administrative provisions covered by waste law have also been applicable in the new Länder. Meanwhile, also the works performed for the preparation of Länder waste acts have almost been concluded. The administrations responsible for waste management are now faced with the difficult task to newly shape the whole infrastructure considering organizational and technical aspects. This refers to both the collection and disposal of waste.

The guideline "Waste Management" is another volume in the series "Documentation of Selected Literature on the Environment" which, above all, is to provide information for those working in administration.

Besides an introducing expert essay commenting on this problem and on the state of the development with regard to the new Länder, the documentation contains:

addresses of important contacts for waste management problems,

addresses of organizers of advanced training courses, meetings and seminars on waste management,

indications on important magazines regularly informing about waste management,

guides to literature on the topic waste management including an overview of general literature, theoretical bases and research works classified according to main points as well as of special literature published in the Länder and at local level.

Standard Literature for Municipal Environmental Protection.

Standardliteratur für den kommunalen Umweltschutz.

C. Rösler; Deutsches Institut für Urbanistik (difu); 1992. difu-Schriftenreihe, Berlin. UBA-TEXTE 13/93; Umweltbundesamt, Berlin.

The decision to be made in the acquisition of a publication is getting more difficult in view of the meanwhile available large number of publications on the different aspects of environmental protection.

In order to give the local authorities, administration libraries and staff members of environmental administrations in the new Länder recommendations which special literature on environmental protection to purchase, the documentation "Standard Literature for Municipal Protection" has been drawn up. For this purpose, experts and staff members of environmental authorities were consulted beforehand.

The results processed have been published in a documentation prepared in the form of a "reader" which is divided into areas of activities and priority subjects and contains besides bibliographic data an indication of contents of each publication. In addition, a short summary of the publication recommended is given.

The following areas of activities and priority subjects are dealt with:

- cross-section tasks
- environmental reports
- environmental impact assessment
- environmental information
- environmental information systems
- environmental management
- nature conservation
- water management
- waste management
- soil protection
- abandoned sites
- air quality control, climate protection
- noise abatement
- environmental law

Waste Water - Introduction and Guide to Addresses, Periodicals, Literature.

Abwasser - Einführung und Wegweiser zu Adressen, Zeitschriften, Literatur.
F. Hatzfeld, C. Rösler; Deutsches Institut für Urbanistik (difu); 1992. difu-Schriftenreihe, Berlin. UBA-TEXTE 12/93; Umweltbundesamt, Berlin.

In the new Länder, the pollutant load of surface waters and of the ground water is quite alarming in many places. The impact on the aquatic environment is attributable, in particular, to both household and commercial and industrial effluents. More than 50 % of the communities is not served by the collection and sewerage system and only a small part has municipal sewage treatment plants. The most essential tasks for improving the situation of the aquatic environment is thus retrofitting or construction of sewers and sewage treatment plants in the towns and communities.

The guideline "Waste Water" is another volume in the series "Documentation of Selected Literature on the Environment" which is to provide information for those working in administration.

Besides an introducing expert essay commenting on this problem and on the state of the development with regard to the new Länder, the documentation contains:

addresses of important contacts for waste water problems,

addresses of organizers of advanced training courses, meetings and seminars on waste waters,

indications on important magazines regularly informing about waste waters,

guides to literature on the topic waste water including an overview of general literature, theoretical bases and research work classified according to main points as well as of special literature published in the Länder and at local level.

Abandoned Sites - Introduction and Guide to Addresses, Periodicals, Literature.

Altlasten - Einführung und Wegweiser zu Adressen, Zeitschriften, Literatur.
C. Rösler, C. Weingran; Deutsches Institut für Urbanistik (difu); 1992.
difu-Schriftenreihe, Berlin. UBA-TEXTE 11/93; Umweltbundesamt, Berlin.

The topic abandoned sites has gained central importance in the new Länder in conjunction with economic reconstruction and ecological renewal. The government and local authorities are required to provide substantial financial resources for remediation of abandoned sites. In both the old and new Länder abandoned sites are considered to have strong obstructive effects on investments to be realized by companies. Their remediation is therefore regarded as key for reclamation of fallow industrial and commercial areas. Town and regional planning as well as a useful town planning development are closely connected with this.

The first number of the series "Documentation of Selected Literature on the Environment" is therefore concerned with this central topic. Besides an introducing expert essay commenting on this problem and on the state of the development with regard to the new Länder, the documentation contains:

addresses of important contacts for problems of abandoned sites,

addresses of organizers of advanced training courses, meetings and seminars on abandoned sites,

indications on important magazines regularly informing about abandoned sites,

guides to literature on the topic abandoned sites including an overview of general literature, theoretical bases and research works classified according to main points as well as of special literature published in the Länder and at local level.

Materials on Environmental Impact Assessment at Local Authority Level (Comparison between State and Local Authority Environment Impact Assessment with Examples).

Materialien zur kommunalen Umweltverträglichkeitsprüfung. Gegenüberstellung von staatlicher und kommunaler UVP mit ergänzenden Beispielen.
K.-H. Fiebig, B. Hühn u.a.; Deutsches Institut für Urbanistik (difu); 1992.
difu-Schriftenreihe, Berlin. UBA-TEXTE 10/93; Umweltbundesamt, Berlin.

As a guideline for local authority administrations the volume "Materials on Environmental Impact Assessment at Local Authority Level" has been conceived and developed. It contains a synopsis of the most important regulations on environmental impact assessments according to the Act on Environmental Impact Assessment and compares them with the relevant or differently shaped local authority regulations.

Related to these main points, a number of materials gathered from practice is presented which can be used for regulating local matters.

The volume is to give the local authorities in the new Länder a lead-in to the topic of environmental impact assessment and also to stimulate with regard to this adopted Act the discussion on environmental impact assessment at local level.

City-Land-River. Environmental Protection in the Community.

Stadt-Land-Fluss. Umweltschutz in der Kommune.

A. Brockmann, K.-H. Fiebig u.a.; Deutsches Institut für Urbanistik (difu); 1992. difu-Schriftenreihe, Berlin.

A travelling exhibition for cities, districts, and communities on the opportunities for community environmental protection.

The brochure "City-Land-River. Environmental Protection in the Community" was conceived to accompany the exhibition of the same name in the context of the project "Information and Consultation for Community Environmental Protection in the New Länder" (the territory of the former GDR) and was translated into English on the occasion of the World Mayors' Summit Conference in Berlin (27 - 29 March 1995).

International Experts' Conference "Promotion of Environmental Protection at Municipal Level - Strategies and Approaches for Action" in preparation of the UN Conference on Environment and Development (UNCED).

Internationale Expertenkonferenz "Förderung des kommunalen Umweltschutzes - Strategien und Handlungsansätze" zur Vorbereitung der UN-Konferenz für Umwelt und Entwicklung (UNCED). BMU, Bonn, 1992.

In preparation of the UN Conference for Environment and Development (UNCED, Rio de Janeiro, 1992), the Federal Minister of the Environment, Nature Conservation and Nuclear Safety jointly with other co-organizers have invited more than 100 experts in urban environmental protection to attend the International Experts' Conference entitled "The Advancement of Urban Environmental Protection - Strategies and Approaches", held in Berlin on 4 - 6 February 1992.

The Ministry requested a summary of programmes, projects and position papers by supranational organizations, international non-governmental organizations and intercommunal organizations, as well as declarations by international cities conferences on ecological issues and urban environmental protection to submit to the participants as informative basis. The Federal Environmental Agency has therefore approached the European Secretariat of the International Council for Local Environmental Initiatives (ICLEI) to evaluate certain documents and to present a synopsis of the documents available.

The study contains a synopsis and comparative analysis and evaluation of programmes and position papers by supranational organizations, international non-governmental organizations, as well as declarations by international cities conferences on ecological issues and urban environmental protection. The evaluation includes 27 pertinent documents dealing with urban environmental issues and the role of local governments in environmental protection. The documents are presented individually, and the results of the analysis according to uniform features are shown in a table. The report finally contains a summary of the relevant results and points out the future need for information and action in the field of urban environmental protection.

Study on the Environmental Situation on the Area of Rostock; Final Report of Project 2: "Ecological Rehabilitation Concept for the Area of Rostock".

Ökologisches Sanierungskonzept für den Großraum Rostock - Abschlussbericht der Projektphase 2.

K. Michel, R. Jathe; MITEC Technology and Engineering Consultants GmbH Bremen; 1992. UBA-TEXTE 39/92; Umweltbundesamt, Berlin.

The final report of project phase 2 of the Rostock Study is the result of the joint efforts of companies, administrations and university departments from the partner cities of Rostock and Bremen over a period of less than two years. The objective established in close cooperation between the partners in Rostock and Bremen was to work out a regional development and rehabilitation programme for the City and District of Rostock.

The aim of the project phase documented in this study was to develop and to incorporate an overall concept for ecologically and socially compatible rehabilitation. Structural development proposals based on the assessment of the results of the survey on the environmental situation. The rehabilitation priorities derived from this can bring about economic effects in situ as soon as possible. With a view to the complete and interdisciplinary concept of the overall study, importance has been attached to coordinating the medial and sectorial partial objectives to the greatest possible extent; this applies particularly to linking and harmonizing ecological aspects with the objectives of regional development planning and economic structural promotion.

Increasing Leisure Facilities in Urban Development and Environmental Impacts.

Umweltwirkungen durch vermehrte Freizeiteinrichtungen in der Stadtentwicklung.

W. Nohl, U. Richter; Werkstatt für Landschaftsplanung und Freiraumentwicklung München; 1992. UBA-TEXTE 6/92; Umweltbundesamt, Berlin.

In this study environmental impacts of increasing leisure and sport facilities in cities are investigated. It is shown under what circumstances such facilities can function as part of an ecologically oriented city development. Besides conceptual reflections about tendencies in leisure sport, about the provision of sport facilities in cities as well as about an environmentally and resource-oriented development of leisure facilities, empirical investigations in different topics are in the center of attention. Thus an analysis of impact potentials of frequent facilities, expert interviews about the present and future environmental situation of leisure facilities in cities, and case studies of ecologically effective sport and leisure facilities are performed. The study ends with an empirically funded catalogue of ecological measures for a better integration of sport and leisure facilities in an ecologically oriented urban environment.

Information Requirements for Environmental Protection Viewed within the Context of Evaluating Land-Use and other Environment-Related Plans - Geographic Information System Containing Codes and Descriptions Found in Land-Use and other Environment-Related Plans (UMPLAN) - Preliminary Study.

Informationsbedarf zum gebietsbezogenen Umweltschutz im Rahmen der Prüfung von Raumordnungsplänen - Informationssystem über umweltbezogene Ausweisungen in räumlichen Plänen und Planungen (UMPLAN) - Vorstudie.

C. Jesorsky, J. van Nouhuys; CADMAP, Berlin; 1992. UBA-TEXTE 5/92; Umweltbundesamt, Berlin.

The task of "coordinating plans and programs which contain land-use planning and regional planning objectives ..." (Article 4, para 5, Federal Regional Planning Act), with the participation of the Federal Minister for the Environment, Nature Conservation and Nuclear Safety (BMU) and the Federal Environmental Agency (UBA) provides the point of departure for this preliminary study. The type and sources of information required by the federal environmental authorities for the above mentioned task of coordination are defined and classified in this study. Preliminary conclusions to the possibility of constructing a Geographic Information System for Environmental Plans and Planning (UMPLAN) which supports this task are derived from these basic definitions and classifications.

The primary conclusion reached during the first phase of work was that the environmentally relevant codes and descriptions necessary for the construction of UMPLAN can only be obtained from a limited number of secondary information sources. These sources are limited to: environmental impact studies, environment-related plans, such as plans for water resource, traffic and waste disposal management, and general land-use plans.

The results of the definition and classification of information in the first phase were evaluated in practice in the second phase. First, it was determined that it was possible to combine codes and descriptions from several different environmental and general plans in a single data processing supported geographic database. Secondly, it was confirmed that, in doing so, the functionality and usability of the previously classified data were preserved.

In the third phase, existing geographic information systems and databases with potential for use by UMPLAN and the possibility of integrating UMPLAN into these systems were examined. Based upon the findings of its three phases of work, this study concludes with possible plans of action for the development of UMPLAN.

Planning Processes for Environmental Plans.

Planungsverfahren für Umweltfachpläne.

M. Holst, J. Hoffmeister, U. Potthoff; Prognos AG Berlin; 1991.

UBA-BERICHT 1/91; Erich Schmidt Verlag, Berlin, ISBN 3-305-03201-0.

For managing environmental problems in the Federal Republic of Germany, a differentiated set of instruments for physical and environmental planning has been established at state, regional and community level, such as nature conservation, air, waste and water management plans.

Based on a comprehensive literature analysis and on discussions with more than 50 experts for environmental and spatial planning, the first part of the study documents and reviews the legal framework and status of elaborating the specific plans in eight of the old states (without

city states) of the Federal Republic of Germany. Suggestions for advancing the planning procedures are being made.

The second part of the study focuses on the recent system of physical and environmental planning (relationship between the environmental plans and between environmental and spatial plans). After discussing the framework of different systems for integrating spatial and environmental planning, the study presents recommendations for advancing the actual system. The suggestions follow the concept "improvement of the quality of planning for the specific environmental plans and of their coordination".

Telematics and Environment.

Telematik und Umwelt.

D. Henkel (Hrsg.); 1990. Deutsches Institut für Urbanistik (difu); Berlin.

The impacts of the production and the use of new information and communication technologies and services have been the subject of numerous studies. The impacts of these technologies and services on the environment, however, have been more or less neglected.

The aim of the report is to give an overview of the interrelationships of telematics on the environment. The report is mostly based on the papers by various authors given at a conference in spring 1989.

Looking at the different papers leads to the conclusion that telematics has, to a remarkable extent, its own environmental hazards, especially because the overall activity level of society is increased and therefore the possible effects of substitution effects are overcompensated. The answer to these hazards cannot merely be the use of even more technology. First, there has to be an evaluation where new technologies are necessary, where they are unnecessary and, finally, where technical solutions are not helpful at all. In particular, non-technical solutions need new approaches, which are only developing slowly.

Air Pollution Prevention in the Field of City Planning - Prerequisites and Elements of a Community Clean-Air Policy.

Luftreinhaltung in Städten.

K.-H. Fiebig, A. Hinzen, G. Ohligschläger; Deutsches Institut für Urbanistik (difu); 1990. difu-Schriftenreihe, Berlin, ISBN 3-88118-160-1.

The present study focuses on the contribution communal planning can make to maintaining pure air in cities. As prerequisites, the authors analyse actual developments in emission and immission rates from power plants, industry, household fuel combustion and transportation; they also discuss the legal channels open to communities to influence the development of air quality. Various community planning approaches are reviewed to determine whether they can provide elements of a preventive clean-air strategy and in what respects they might be improved.

Environmental Effects of a Possible Introduction of a 30 km/h Speed.

Umweltbedeutsame Effekte einer möglichen Einführung von Tempo 30 im Innerortsbereich.

K. Schäfer-Breede u.a.; Büro für Verkehrsökologie Bremen in Zusammenarbeit mit dem Büro Harlof Hensel Stadtplanung Aachen; 1990. Umweltbundesamt, Berlin.

Part 1: Catalogue of Measures for Speed Limit 30 km/h.

Teil 1: Maßnahmenkatalog "Tempo 30". Beschreibung und Analyse von 200 Maßnahmen zur Geschwindigkeitsdämpfung in der Stadt.
UBA-TEXTE 23/90.

Part 2: Case Studies - Model Calculation.

Teil 2: Fallstudien. Eine Verkehrsmodellrechnung am Beispiel von vier Städten.
UBA-TEXTE 24/90.

Part 3: Environmental Sound Vehicles.

Teil 3: Einsatzchancen von kleinen umweltschonenden Fahrzeugen im Zusammenhang mit "Tempo 30" und Verkehrsberuhigung - Typenkatalog und Expertenbefragung.
UBA-TEXTE 25/90.

This survey is intended to describe and assess the effects of urban speed restrictions, taking into account all environmentally significant influences. Measures, respectively sets of measures, taken to restrict speed or implemented as a result of speed restriction, are analysed at various levels.

The catalogue of measures (part 1) is not only a comprehensive and well-planned encyclopaedia but, due to various indexes, an extremely user-friendly one as well. All measures are fully explained and examined by means of a check list of 31 criteria.

The quantification of environmentally significant effects is carried out by means of model calculation (part 2). Compatible measures and elements of speed reduction are transferred to data rings and traffic-nets of carefully selected cities (Duisburg, Muenster, Offenbach/Main, Neustadt a.Rbge.). Accepted simulation methods serve to calculate and then compare the results with the initial condition. 14 model calculations for four cities allow for a generalization of results concerning the effects of "speed limit 30" and the optimal implementation of "speed limit 30" concepts.

The excursion (part 3) examines the status of innovative vehicle concepts within the framework of "speed limit 30". The stage of development is researched and experts are consulted. The result is a kind of "status report", comprising the most interesting vehicles, statements of experts, evaluations and assessments, comprehensive appendices and a concise summary of results.

Planning and Construction of Commercial Locations Incorporating Environmental Protection.

Umweltschutz bei Planung und Bau von Industrie- und Gewerbeanlagen.

W. Henze, A. Hinzen, H. Pieper; Büro für Kommunal- und Regionalplanung Aachen; 1990.
UBA-BERICHTE 10/90; Erich Schmidt Verlag, Berlin, ISBN 3-503-03176-6.

Given that no overview of approaches concerning planning and construction of environmentally friendly industrial development has yet been made available, this investigation provides a thorough examination, documentation and analysis of cases in industrial construction incorporating advanced locational and operational anti-pollution measures.

Under investigation are concepts and measures regarding:

Adaptation of site planning and constructional concepts for commercial capability to ecological conditions of the site;
Space-economizing building and opening-up or redevelopment of industrial locations, as well as space-economizing industrial and building concepts;
"Greening" of existent and planned industrial areas, and "greening of buildings;
Protection of and economizing on water;
Economizing on energy resources in short supply by utilizing energy rationally, and substitution of renewable energy sources for finite ones;
Avoidance and reduction of emission (i.e., noise, air pollution, smell, effluent), and protection of man and the environment against noxious immissions.

Furthermore, procedures enabling anti-pollution aspects to be better encapsulated into planning and construction (e.g. ecological site reports, environmental impact assessment and complementary plans for landscape preservation) are presented.

Workshop Series "Ecological Construction", held since 1981 in
Collaboration with the Theodor Heuss Academy.

Workshop-Reihe "Ökologisches Bauen" in Zusammenarbeit mit der Theodor-Heuss-Akademie.

Environment Compatible Building Materials.

Umweltgerechte Baustoffe.

9. Workshop, Umweltbundesamt/Theodor-Heuss-Akademie, 1990.

UBA-TEXTE 14/90; Umweltbundesamt, Berlin.

Ten Years Workshop "Ecological Construction": Experiences and Perspectives.

10 Jahre Workshop "Ökologisches Bauen": Erfahrungen und Perspektiven.

10. Workshop, Umweltbundesamt/Theodor-Heuss-Akademie; 1991.

UBA-TEXTE 7/91; Umweltbundesamt, Berlin.

The workshop series "Ecological building construction" has been conducted in Gummersbach each year since 1981 in collaboration with the Theodor Heuss Academy. Architects, representatives of local building authorities and the housing and construction business, as well as owners and tenants, meet for an in-depth exchange of experience.

The first workshop in 1981 focused on bringing together representatives of the various lines of ecological construction (alternative construction, construction suited to climate, natural construction, biotecture, bionics, construction biology etc.). This resulted in a joint statement on the principles of ecological construction.

In 1982, with the participation of building law experts, the discussion centered on the relationship of the current building law and the possibilities of ecological construction. An important result was that the current building law, notably the building code law, does not impede ecological construction to any significant extent; rather, the building law objectives were found to largely correspond with the concerns of ecological construction.

Difficulties encountered in obtaining building permits are either due to the fact that the competent authorities are unnecessarily restrictive and reluctant to experiment in interpreting the building law or they are unspecific in nature and would thus also occur in the case of conventional buildings.

At the workshop held in 1983, 17 "projects of ecology-oriented buildings and settlement" were presented. In addition to individual buildings, four housing-estate projects deserve

particular mention: the eco-settlement Herford, the ecological structure-biological pilot project Gladenbach-Friebertshausen, the ecological settlement Kassel, and the ecological building project in Hamburg-Allermöhe.

In 1984, the subject of "ecological construction in housing and urban renewal (financing)" was dealt with. Representatives of ecological construction, housing enterprises and home savings banks exchanged information and views.

The workshop in 1986 dealt with the subject of "ecological urban renewal". In addition to the status of implementation of various settlement projects, the discussion mainly focused on problems and problem solutions with respect to various technical measures (greenhouse/winter gardens/oriels/loggias, the greening of roofs, water recirculation).

The workshop in 1987 was entitled "Ecology-oriented urban renewal in post-war housing estates". This subject was dealt with in several lectures and a planning exercise which illustrated available models for action and decision-making. Using an area in Gummersbach as an example, the exercise made it possible to realistically reconstruct basic decision-making processes and available options for solving specific problems.

The workshop held in 1988 was on the subject of "ecology-oriented construction of commercial buildings". The discussion dealt with the question, which elements of ecology-oriented housing construction can be applied to this sector. Various examples of environmentally sound development projects in industry and commerce were presented. It was shown that, with respect to environmental requirements, the scope for planning and action varies, depending on the structural and economic conditions in a region. Sites preferred by industry may be subject to substantial requirements and conditions with respect to ecologically-oriented planning and construction. Companies use this fact for advertising purposes and for improving their image, and claim it as a "social benefit" enjoyed by their employees.

Quite a lot of experience is available as regards the planning and development of industrial plants. In contrast, there are only a few cases of ecology-oriented architecture and building technology to be found in German-speaking countries.

The workshop held in 1989 dealt with the subject of "environmentally compatible building materials". Up to now, building materials have usually been selected under the aspects of usability, economy, and aesthetics. The environmental pollution caused by the extraction/manufacture, use and disposal of these products, however, has only rarely been taken into account. Government regulations have hitherto mainly been issued in response to hazards and damage ascertained. Yet, an anticipatory assessment of these products is necessary in the light of the environmental policy principle of precaution and due to their longevity, their immediate effect on the living environment of human beings and the considerable problems encountered after damage has occurred.

There was a broad agreement among the participants of the workshop that, as a first step towards this end, manufacturers of building materials should be required to identify the ingredients of their products (declaration). The environmental properties of a given building material or component can basically only be assessed if its specific uses are taken into consideration.

The 10th workshop dealt with the present experience on the topic "ecological building" and the perspectives resulting from it. Different projects are presented. The current state of public discussion as well as the possibilities and requirements needed to promote environmentally compatible building are described.

Baunutzungsverordnung (Planning Regulations) and its Relevance for the Environment - Stock-Taking and Proposal for a Reform; Reflections about a Land-Use Regulation.

Die Umweltrelevanz der Baunutzungsverordnung (BauNVO).
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The purpose of the study is to define criteria that intensify environmental protection for an amendment of the Baunutzungsverordnung (Planning Regulations). Starting point of the government of the Federal Republic of Germany is to achieve a stronger recognition of environmental issues in the Bauleitplanung (Local Planning By-Laws). This was the guideline for the reform of the German Baurecht (Planning Law) and the investigation. In the first part of the study, there is a stock-taking of all criteria implemented in the present Baunutzungsverordnung (Planning Regulations) for environmentally relevant planning tools at the community level. Secondly, the limits of the present law that prevent ecologically oriented urban planning are analysed and possible reforms are developed. The third part looks at proposals to develop the Baunutzungsverordnung (Planning Regulations) into a general Land Use Regulation. The latter takes construction uses as well as other possibilities of land use into consideration.

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