AGENDA 21

GRAZ

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Summary

AGENDA 21

GRAZ

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Summary

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AGENDA 21

GRAZ
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GUIDE

The basis for the Application of the City of Graz for the „European Prize - Sustainable City“ is formed by the Issue Related Environmental Program „Ökostadt 2000“, with which the City of Graz is one of the first European Cities to have a „Local Agenda“ in the sense of the UNCED Conference in Rio the Janeiro (1992). The Sustainable Action Plan of the City of Graz does not only include the environmental aspects of „Ökostadt 2000“ but also essential projects and basic rulings on sustainability that also cover social and economic aspects.

This integrated overall concept of the city of Graz, which is extensively documented in the sense of a holistic agenda process, is „enclosed“ to the Application Form.

In the Summary Description, please find

- an introductory survey of the date of the City of Graz and its developments on the way to sustainability,
- the Vote in the Municipal Council to the „Local Agenda 21“ Ökostadt 2000 from July 1996
- as well as a presentation of the projects (164) that decisively influence the sustainable urban development of Graz. A survey table gives first information on all the projects. As far as the contents are concerned, these projects are allocated to the 40 items * of Agenda 21 (inasmuch as they apply to Graz).

Each project is explained in a Project Master Data Sheet as to Institution, Project Title, Contact, Aims and Contents, Present Situation and Future Perspectives of the Project, Reference to Agenda 21, Documents.

The documents to the individual projects are in „slipcovers“, which are kept in a wooden box. The slipcovers are marked with the respective numbers of the items of the Agenda.

In each slipcover, there is a brochure in that all the projects belonging to the respective items of the Agenda are listed. There are also those projects included whose reference to this item of the Agenda goes beyond their main allocation.

The documents to the projects are exclusively filed in the slipcover, their respective main reference to the Agenda (bold in the Project Master Data Sheet) being stated.

* taken from „Environment and Development“ - Agenda 21, a summary of the results of the UN Conference on Environment and Development; published by the Austrian Information Service for Development Policy (Berggasse 7, A-1090 Vienna), Dec. 1992
Report to the Local Council
"Ökostadt 2000"

Bericht an den Gemeinderat
"Ökostadt 2000"

GRAZ
AUSTRIA
GRAZ MUNICIPAL AUTHORITIES
Section 23 - Department of Environmental Protection

GZ: A 23 - K - 139/1990-90
06.07.1995
Ing. List / Dr. Moshammer

Re: Environmental Programme Graz
Ökostadt 2000
On the road to sustainable
city development
Local Agenda 21
Resolution proposal

Advisory Committee:
Environmental Committee

Reporter:
City Councillor Dr. Peter Weinmeister

Report
to the
Local Council

The Interuniversitäres Forschungszentrum für Technik Arbeit und Kultur (IFZ) / interuniversity research centre for technology, labour and culture was commissioned in June 1990 with elaborating an “environmental programme” for the provincial capital of Graz in collaboration with the Department of Environmental Protection. The mainstay for creating and implementing this environmental programme “Ökostadt 2000” is the involvement of all interested citizens of Graz. All inhabitants of Graz were called upon in a special issue of BIG (November 1990) and at various public talks to put forward their suggestions and environmental ideas.

This environmental programme “Ökostadt 2000” provides the city of Graz with an integrated concept taking into account the wide range of aspects of various subjects, problems and basic conditions with environmental relevance in local environmental policy. The environmental programme was completed in 1992 and presented to the clubs of the local council. Since then it has been a constant working aid for the department of environmental protection with all the department’s action geared towards this programme. It contains more than one thousand pages of situation analyses and environmental policy guidelines for Graz on its way towards sustainable city development up to the turn of the millennium.

Proposals as to measures to be taken for concrete action were combined to form nine action programmes divided according to the most important subject areas of environmental relevance - also beyond the area of responsibility of the department of environmental protection.

Programmes of action

- Environmental protection in private households
- Environmental protection in public facilities
- Corporate environmental protection
- Ecological agriculture
- Water and bodies of water, development of natural landscapes and green spaces
- Historical burdens
- Traffic and environment
- Noise reduction and avoidance
- Protection of the earth’s atmosphere
Although projects such as Ökoprost, Ökodrive, Municipal Energy Concept and Thermoprofit were certainly successful on an international scale, it became clear that many possibilities of action exceeded the area of competence of the Department of Environmental Protection and also that a collaboration of all departments of the municipal authorities would be necessary in order to achieve the objectives of the “Ökostadt 2000” environmental programme. For this reason, the environmental programme is to be elevated to the level of a local council resolution and wide implementation is to be commenced. In order that the programme be supported by everyone involved, all groups represented in the local council, all affected departments, associations, institutions and interest groups were invited to make statements. These statements were recorded and woven into the programme by the Department of Environmental Protection. The present summary is thus a revised and updated summary of the environmental programme completed in 1992.

With the “Ökostadt 2000” environmental programme as a ”local agenda” of the city of Graz, the aim is to achieve a new quality of environmental protection policy at the local level. The classical notion of environmental policy in terms of safeguarding or restoring a quality of environmental elements soil, air and water as required for human health is to be extended to form a precautionary environmental policy.

**Local Agenda 21**

A great many approaches and tasks in implementing the Agenda 21, resolved at the UN Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992, are anchored at the local level. For example, Agenda 21 calls upon 21 cities and municipalities and other local facilities to elaborate a ”Local Agenda 21” by 1996. Agenda 21 is aimed to be an extensive programme of action for the transition period to the 21st century. It investigates the most urgent problems of the present day and is an expression of global agreement and political commitment to top-level cooperation in the area of environmental protection and development.

**Implementation**

In the spirit of wide public participation in implementing the “Ökostadt 2000” environmental programme and the objective of participation of Graz’ citizens in local environmental policy, the aim is to carry out the process of evaluation at regular intervals not internally in the municipal authorities but rather with the participation of experts, environmental groups, community initiatives and interested citizens (“Graz Öko-Team”). On the basis of the pre-defined quantitative objectives of the “Ökostadt 2000” environmental programme, under the overall control of the Department of Environmental Protection, it is planned to scrutinise and evaluate the progress of the agreed objectives.
Pre-defined objectives in the individual areas

In order to make it possible to evaluate the degree of objective achievement in quantitative terms, quantified “milestones” will be established in the most important areas of environmental policy as intermediate objectives. These milestones will play a major role in evaluation.

<table>
<thead>
<tr>
<th>Area</th>
<th>Sustainability Parameter</th>
<th>Objective (by 2000)</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air</td>
<td>Emission of SO₂, CO and dust</td>
<td>-30%</td>
<td>KEK City Senate resolution</td>
</tr>
<tr>
<td></td>
<td>Emission of NOₓ, VOC</td>
<td>-60%</td>
<td>Ozone Act</td>
</tr>
<tr>
<td>Noise</td>
<td>Length of sections of roads with more than 65 dB(A)</td>
<td>-10%</td>
<td>Fläwi</td>
</tr>
<tr>
<td>Energy and climate</td>
<td>Level of CO₂ emissions</td>
<td>-20%</td>
<td>Climate Alliance</td>
</tr>
<tr>
<td></td>
<td>Level of power consumption</td>
<td>-7%</td>
<td>KEK</td>
</tr>
<tr>
<td></td>
<td>Percentage of regenerative sources of energy</td>
<td>25%</td>
<td>KEK</td>
</tr>
<tr>
<td>Traffic</td>
<td>Modal Split</td>
<td>cf. p. 10 (enclosure)</td>
<td>STEK Graz overall traffic concept</td>
</tr>
<tr>
<td></td>
<td>Traffic mileage private motorisation</td>
<td>-2%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>New motor vehicle registrations</td>
<td>balance</td>
<td>internal</td>
</tr>
<tr>
<td></td>
<td>Mileage of buses and trams</td>
<td>+10%</td>
<td>internal</td>
</tr>
<tr>
<td>Waste</td>
<td>Local residual waste volume</td>
<td>-30%</td>
<td>Styrian waste management concept</td>
</tr>
<tr>
<td></td>
<td>Local total waste volume</td>
<td>-13%</td>
<td>Federal waste management plan</td>
</tr>
<tr>
<td></td>
<td>Trade/industry (non-reusable waste, use of raw and auxiliary materials)</td>
<td>-30%</td>
<td>Ökoprofit</td>
</tr>
<tr>
<td></td>
<td>Hazardous waste</td>
<td>-50%</td>
<td>Ökoprofit</td>
</tr>
<tr>
<td>Water</td>
<td>Volume of drinking water transported</td>
<td>-5%</td>
<td>internal</td>
</tr>
<tr>
<td></td>
<td>Water quality categories</td>
<td>cf. p. 12 (enclosure)</td>
<td>Styrian water quality atlas</td>
</tr>
<tr>
<td>Soil</td>
<td>Sealed areas</td>
<td>balance</td>
<td></td>
</tr>
<tr>
<td>Natural green landscapes and spaces</td>
<td>Protected landscapes, additional</td>
<td>50 ha</td>
<td>Biotope mapping</td>
</tr>
<tr>
<td></td>
<td>Nature reserves, additional</td>
<td>30 ha</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural monuments, additional</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>
Hence, the following

Proposal

is put forward for approval by the Local Council in accordance with §45 Par. 6 of the Statutes of the Provincial Capital of Graz:

1. The present motive report is acknowledged with approval. The abstract of the "Ökostadt 2000" environmental programme with the sections "I. Introduction and pre-defined objectives air, noise, energy and climate, traffic, waste, water, natural landscapes and green spaces" and "II. 9 programmes of action" are seen as suggestions for measures and form an integral part of the set objectives.

2. It is planned to implement the set objectives and programmes of action with the suggestions of measures contained in the "Ökostadt 2000" environmental programme as far as possible in the spirit of sustainable urban development in Graz and along the lines of putting Agenda 21, the central document of the UNCED Conference, Rio de Janeiro 1992, into concrete action.

3. The departments of the municipal authorities of Graz shall be commissioned with pursuing the objectives and programmes of action and suggested measures within the scope of their areas of responsibility.

4. The Department of Environmental Protection shall be commissioned with establishing the "Graz Öko-Team" after approval of the "Ökostadt 2000" programme.

The "Graz Öko-Team" shall be headed by the Department of Environmental Protection and shall be comprised of one representative each of Graz University of Technology and the Karl Franzens University, the Coordinator of Environmental Affairs of the city of Graz and the Nature Protection Officer of the city of Graz, the head of the Department of Health, the head of the Department of Urban Development and Preservation, one representative of the Municipal Depot, the Environmental Lawyer of Styria Province, the Coordinator of Environmental Affairs of Styria Province, the head of Section Ia of the Styrian local government and one representative of Graz environmental organisations.

The "Graz Öko-Team" shall inspect and evaluate progress of the objectives of the "Ökostadt 2000" environmental programme after preparation of evaluation documents by external experts. In the event that set objectives are not met, reasons for such failure and plans for achieving objectives by the next evaluation deadline shall be indicated by the city councillor for environmental affairs to the environmental committee after a hearing of the municipal departments entrusted with these tasks. The mayor and city councillor for environmental affairs shall then present an appropriate report to the local council.

The "Graz Öko-Team" shall draw up a report as to the status of implementation of the proposed measures for the 9 programmes of action in accordance with the area of influence of the city of Graz and after hearing the municipal departments entrusted with these tasks; this report shall be presented by the city councillor for environmental affairs to the environmental committee. The mayor and city councillor for environmental affairs shall then present an appropriate report to the local council.

These evaluations and reports shall be performed every 3 years, i.e. for the first time in 1998 and after expiry of the year of target achievement, i.e. in 2001.

In charge of programme: Head of Department:

Dr. Moshammer eh.
Ing. List eh.

The city senate officer:
The Environmental Committee has conducted preliminary discussions of the present document at the session of 6.7.1995 and has approved of proposal to the local council.

GRAZ MUNICIPAL AUTHORITIES HEAD OFFICE
Editorial Office of the Gazette

The proposal of the Environmental Committee was unanimously approved, except the chapter "Traffic" (2 votes against)

Graz, this 6th day of July 1995
The Secretary
The City of Graz on the way to sustainability

Die Stadt Graz auf dem Weg zur Nachhaltigkeit

AGENDA 21

GRAZ
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I GRAZ - KEY DATA OF A "GREEN CITY"

1.1 MISCELLANEOUS

Subject: Graz, the provincial capital of Styria
Geographical location: 47°05' north 15°27' east
Annual temperature: 9.7 °C on average
Area: 12,758 ha, of which 47% building land
Inhabitants: 302,000 (Present), 240,000 (Main Residence)

1.2 CULTURE

Old:
large closely knit Old Town centre with trends in urban development towards strict preservation of the old buildings.
"Highlights": The clocktower on the Schloßberg as a remnant of the old fortifications is the city landmark.
The Landhaus with the armoury, the world’s largest arsenal of historical weaponry (approx. 30,000 exhibits).
Eggenberg Château (the "Escorial" of Graz)
The opera house and Schauspielhaus theatre with bill all year round
Congress centre with casino and concert halls

New: Careful combination of old and new is aimed at
Festivals: Styriarte (music festival)
Steirischer Herbst (avant-garde festival for all forms of art)
Other: German-speaking centre of modern literature ("Forum Stadtpark"/Peter Handke, Wolfgang Bauer etc.)
Centre of modern architecture
Integration of cabaret and street performance/art

1.3 RESEARCH AND SCIENCE

Karl-Franzens University
University of Technology
Academy of Music and Performing Arts
(approx. 40,000 students altogether)

Mention should also be made of "Joanneum Research" and "AVL", research institutions of international standing.

1.4. Economy

165,000 persons in gainful employment in around 9,500 companies with the following major names:

Siemens
SGP (Simmering Graz Pauker)
AVL (Gesellschaft für Verbrennungskraftmaschinen und Meßtechnik mbH)
Paar (catering supplies)
AMS-Unterpremstätten (Austria Mikro Systeme International AG)
Steyr-Daimler-Puch (vehicle technology)
Eurostar-Chrysler
Waagner-Biro
Maschinenfabrik Andritz
AVI/EVG/Marienhütte (Stahl- und Walzwerk GesmbH)
Steirerbrau ("Reininghaus" and "Puntigamer" brand beers)
II LOCAL AGENDA 21 - THE STARTING POINT

Despite all its economic, scientific and cultural self-awareness, Graz gives top priority to the principles and objectives of environmental protection - for good reasons:

2.1 THE "DISASTER"

The geographically attractive location of Graz in a basin shaped valley amidst any number of hills turns out to be a major disadvantage from the point of view of air hygiene owing to the frequent occurrence of inverted atmospheric conditions: this was the cause of the now proverbial "smog winter of 1988/89".

But this salutary shock also sensitised the wide public to the environmental issue, bringing about an urgent desire to abandon this defensive position of helplessness and to take the offensive post-haste, not only repairing past mistakes but also making provisions for the future.

2.2 THE "PHOENIX SYNDROME"

Since then, Graz has been a leader in national and international bests in environmental statistics:

- switching over to ecologically compatible sources of heating energy (e.g. district heating),
- its readiness to avoid and separate waste,
- its environmentally friendly consumer behaviour,
- its readiness to promote "Gentle Mobility" (e.g. city of cyclists)

After the experience of the "smog winter" in Graz, there has been a "boom" of willingness amongst politicians,

- to develop binding programmes and interlinked strategies,
- to win the support of the population and, above all, NGOs as co-operative partners by stepping up information campaigns,
- and to make available considerable funds for related subsidies.

The accession to the Climate Alliance or the WHO network "Healthy Cities" are outward, but nevertheless most serious manifestations of these convictions.
2.3 **The scope of action**

An immense advantage in this respect is that the provincial capital of Graz has always had its own local constitution:

Being a municipality with its own statutes, the local council with its 56 members and the municipal government can to some extent decide on fundamental municipal issues such as for instance sustainable urban development and the necessary social, ecological and economic framework.

This is a basic prerequisite not only for the frequently cited "global thinking", but also for "local action".

This scope of action has been made use of in Graz in any number of innovative schemes and projects and is thus the framework for surmounting the problems facing the city.

2.4 **The ambitious objective**

It was above all in 1995 that politicians resisted the temptation to just draw up a mere list of conditions and vague requirements and unanimously approved the environmental programme ÖKOSTADT 2000.

Rather it was possible to illustrate interrelations in this local agenda 21 and to focus on the necessary action in the form of a catalogue of measures with a precise time schedule - with the unanimous agreement of all political factions.

Every three years, an "eco-team" comprising internal and external experts assesses to what extent the prescribed parameters have been adhered to, making any subsequent adjustments where necessary.

The environmental programme is thus the fundamental guideline for sustainable development and is reflected in a whole range of sub-concepts and projects that have either already been begun or which are at the planning stage; the significance of these projects goes far beyond the environmental sphere.

In the end, it was the sum of all these measures and projects that earned Graz the climate protection award of GREENPEACE at the end of 1993.

The "city plan" itself and its two main pillars, the Municipal Energy Concept (KEK) approved in 1995, and the ÖKOPROFIT project for commercial environmental provisions are to be summarised in an exemplary manner. Attention is, however, drawn to the fact that they also only go to form part of the unified whole in the sense of the "local agenda 21", together with all the other nuts and bolts in this cluster of measures.
III ON THE ROAD TO THE ÖKOSTADT 2000

The "Ökostadt 2000" is primarily a cluster of measures with concrete objectives and schedules. Separate plans of action are centred around relevant environmental issues and related areas:

3.1 The areas

- Private households
- Public facilities
- Commercial enterprises
- Farming
- Water, bodies of water
- Natural and green spaces
- Historical burdens
- Traffic
- Noise
- Protection of the earth’s atmosphere

With the approval of this programme, Graz became one of the first cities in Europe to meet the objectives of the local agenda 21 set up for municipalities at the environmental and climate protection conference in Rio.

3.2 The first "Stage of Construction"

Being a field linking a variety of disciplines, environmental protection - and thus also the ÖKOSTADT 2000 project - involves combining a number of extremely varied areas and issues. Graz Department of Environmental Protection has thus joined forces with the Inter-university Research Centre (IFZ) with the aim of putting this new ‘building complex’ on sound foundations. Public participation is one of the most important pillars of this building: By means of public discussions in all districts of the city, an idea competition at schools in Graz, and a permanent ‘idea exchange’, over the past four years we have collected, evaluated and also implemented constructive contributions. Finally, 146 institutions within the municipal authorities and also external offices (federal, local, interest groups, science etc.) have been invited to comment on the almost complete plan and to make any necessary corrections. Reactions were predominantly extremely positive - it was possible to integrate a great many constructive suggestions directly into the programme. With that, the democratic opinion-making process had been provisionally completed, which is not always the case with programmes of this nature.
3.3 APPROVAL AND MONITORING

However, successful implementation of this jointly elaborated catalogue of measures is only possible with the widest possible consensus of all positive forces.

The aim was thus that all the parties represented in Graz local council should be able to agree to this programme and the accompanying monitoring system without any ulterior political motives, which was indeed the case after an intensive final discussion:

an ÖKOTEAM comprising 12 internal and external experts carries out an „Ökocheck“ every three years so as to monitor the set objectives and timetables on a regular basis. The aim is to guarantee that planned measures are actually implemented or, where requisite, fine-tuned. Another task is to monitor links with existing and planned programmes in Graz.
IV THE "ENERGY AND CLIMATE" EXAMPLE

The Municipal Energy Concept of the city of Graz (KEK Graz), approved by the local council in 1996, is primarily based upon the principle of reducing air pollution and climate protection. The prime objective is to reduce CO2 emissions by 50% by the year 2010 as compared with 1987 and, with the aid of concrete projects such as THERMOPROFIT, to promote ecologically more compatible economic development.

4.1 THE REQUIREMENTS

The city of Graz will only be able to come up to the requirements of the planned "Ökostadt 2000" if energy policy and climate protection are made an integral part of municipal planning for the future and also only if it is possible to achieve agreement with all other regional administrative bodies.

Improving the air pollution situation and effectively reducing greenhouse gas emissions will also have a major influence on the attractiveness of the city for housing and as a site for business location.

The fact that providing energy services can involve considerably less energy and a substantial reduction of pollutants without any loss of quality of life has often been proven. With the aid of the KEK projects, the aim is to create, test and disseminate suitable tools and basic conditions as well as the culture required for an efficiency revolution of our energy system.

Even in conceiving the KEK, the city of Graz has endeavoured to gear the programme more closely to actual implementation and thus to take concrete measures from the very outset.

The tools, projects and measures were elaborated in close collaboration with the people who will be responsible for their implementation.

4.2 THE BUILDING BLOCKS

The main projects of the city of Graz aimed at achieving the KEK objectives are listed in the seven KEK building blocks below:

- Thermoprofit, analogously to Ökoprofit, is an "all winner model" which will save heating costs above all in the area of renewing heating technologies and which will also step up economic activity. A cleverly thought-out financing model is to ensure that any necessary investment costs are pre-financed and are recouped for the consum-
er alone by means of energy savings;

- Municipal Energy Management, increasing energy efficiency in municipal buildings;
- Clean Heat, extending the district heating network and introducing obligatory link-up to district heating for new and large buildings; consolidating the natural gas system.
- Energy-conscious Building, building low-energy houses in Graz;
- Solar Initiative, solar power utilisation for hot water and semi-solar room heating;
- Ökoprofit Energy, increasing efficiency in energy utilisation in commercial enterprises;
- Ökodrive, introduction and promotion of "low-emission vehicles".

4.3 THE TOOLS

In order to implement these KEK building blocks, a professional, private sector organisation is to be installed in Graz which shall take the form of an energy agency. Enacting the KEK measures with an efficient use of energy and by utilising renewable sources of energy will thus go to achieve the targeted reduction of CO₂.
V THE "ÖKOPROFIT" EXAMPLE

"Environmental protection as self-interest" is the indicative subtitle of the Graz ÖKOPROFIT project which is to turn the healthy egoism of business to good use for the environment.

5.1 THE "NEW GROUND"

Just about five years back to this day when the ÖKOPROFIT project was initiated, the city of Graz was breaking new ground in several respects in the area of corporate environmental protection:

- New ground in consistent link-up of business, science and administration in solving common environmental problems.
- New ground in uncompromisingly prioritising environmental provisions over environmental repair; implementation of concrete parameters of sustainability in every single ÖKOPROFIT company and absolute transparency both internally and externally.
- New ground above all in economic evaluation of ecological measures: environmental protection was to pay off, the principle of self-interest was recognised as a healthy driving force in the environmental sector, too.
- New ground finally in its applicability to a wide range of company types and sizes, indeed to environmental management in the family and at schools, in the company and at the workplace, right up to municipal administration and far beyond.

And it was precisely this possibility of universally applying a simple principle that brought about the undreamt-of international interest in this approach adopted by the city of Graz.

5.1 THE PARTNERS

In addition to companies willing to innovate, it is above all the sectors of science and research at the universities of Graz that have joined forces with Graz Department of Environmental Protection. This "triumvirate" has been able to effectively test the principle of sustainability and active provisions instead of passive repair and to certify this principle as being both ecologically and economically expedient.

Apart from the obvious savings on resources and thus costs caused by emissions and waste, management and staff can also be motivated by the annual presentation of company awards and
great image gain.

Graz Department of Environmental Protection is thus a promoting partner and not merely a regulatory bureaucratic authority.

5.2 THE EFFECT

In 1995, the number of companies presented this ÖKOPROFIT award for special and well-defined environmental achievements along the lines of this successful concept had almost doubled from 15 to 27. At the same time, national and international interest in Graz environmental projects, particularly with regard to the eco-audit of the EU or the UN "Local Agenda 21", has steadily increased.

The principle of sustainability and corporate environmental provisions is one of the major pillars of the Graz “Ökostadt” environmental programme which can draw on its practical experience as a “plan of action” not least from the experience gained with ÖKOPROFIT over the past years.

5.3 THE CHANCE

The fact that Graz is today held to be a centre of "eco high-tech", "cleaner production" and ecological innovation thanks to its forward-looking environmental programmes geared to implementation, is first and foremost a victory of a new mode of thinking in terms of "positive egoism" over traditional patterns of behaviour and outdated prejudices from all corners. As an "Austrian centre of environmentally compatible production" with special facilities such as an energy agency (Regional and urban energy management in the European Union) currently under construction, the aim is for Graz to pass on its positive experience with environmental protection as an instrument of economic stimulation, increasingly so in future and also beyond the borders of the city.

Programmes and strategies derived from the demands of an “ÖKOSTADT 2000” and successfully manifested in actual projects such as ÖKOPROFIT are to provide the impetus to modern municipal environmental management. At the same time, however, the city of Graz has the rare opportunity of consolidating its position among a whole range of related and ambitious municipalities as a centre of business, science and culture with a special touch - as an eco-city 2000. This factor is considerably backed up not least in the new economic model of the city of Graz.
5.4 THE INTERFACE

On the other hand, a major aim from the very outset was to operate ÖKOPROFIT not as an isolated and jealously guarded secret project, but rather as an open system with interfaces to major international developments.

It is no accident that even at the beginning ÖKOPROFIT was held to be a run-up to future auditing systems such as the EU eco-audit.

Developments have verified endeavours in Graz: ÖKOPROFIT companies can adjust more quickly to the new demands of eco-auditing as many of them have long achieved the required obligations, gearing their corporate philosophy to internal environmental checks and setting the necessary environmental goals.

What remains are the considerable costs for the companies that are incurred by eco-auditing. But here, too, ÖKOPROFIT aims to offer its support with the aid of a separate "eco-auditing building block".

The advantage: Several companies together can set up the necessary basis for eco-auditing more cheaply. This also promoted the exchange of experience and team spirit - values stressed in the ÖKOPROFIT "club".
VI THE "ECONOMIC MODEL" EXAMPLE

The current economic position and objectives (fields of competence) are laid down by a new economic model of the city of Graz, displaying the paths and goals of future developments in close correlation with the Graz “ÖKOSTADT 2000” / Local Agenda 21 environmental programme.

Here, Graz is above all aiming to be measured by three qualities:

- its will to innovate,
- its readiness to communicate,
- its ability to integrate,

As a centre of environmentally oriented technologies, Graz is a special focal field of competence:

- by creating an eco high-tech network,
- by promoting suitable company settlements,
- by the active environmental orientation of the city itself.

Concrete projects aimed at achieving these objectives are even now being set up or are at least in planning and conform to the set demands of the environmental programme:

- Cleaner Production Centre Graz (as an "incentive" for the entire region),
- Business Park Südost focuses on "environmental and communication technologies",
- Energy agency for disseminating ecologically compatible technologies.

With this last example of interlinking and clustering, we come full circle with the ecologically oriented programme parameters and joint, interdisciplinary solutions taking into account economic realities: projects such as ÖKOPROFIT and THERMOPROFIT within the environmental programme ÖKOSTADT 2000 have shown Graz the road ahead, abandoning the ecological and economic defensive and adopting a holistic environmental and economic policy.
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International Cooperation

Internationale Zusammenarbeit
Summary

Organization of international conferences and congresses on a more efficient use of energy and the use of renewable energy carriers. .................. 3

Joining of the Climate Alliance and implementation ................................................................. 5

Peace & Development ................................................................. 6
Institution
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Project Title
Organization of international conferences and congresses on a more efficient use of energy and the use of renewable energy carriers.

Contents and Aims
For discussing one’s own ideas, for making use of the experience of others and for creating news approaches, an international exchange of ideas is useful. Therefore, the Styrian Capital of Graz always organizes international conferences and congresses that deal with this topic. Examples of this are the Second International Conference of Energy Consultants „Closing the gaps efficiency and inefficiency in East and West“ as well as the international Workshop of the Climate Alliance for the Municipal Energy and Emission Balancing.
Present Situation and Future Perspectives
The problems to be solved on the way to a sustainable development in climatic protection and the more rational use of energy and the use of renewable energy carriers have changed in the last few years. Whereas the questions still related to the technical implementation some years ago, today’s barriers for the far-reaching implementation of the technically fully developed products can only be overcome by an interdisciplinary answer to financial, legal and partly technical questions. Therefore, an International Workshop on Financial Techniques for the Use of Renewable Energy Carriers took place in Graz on March 5th, 1996, to complete the two events mentioned above.

Reference to Agenda 21
2, 4, 8, 9, 30, 33, 34, 36, 39, 40.

Documents
ICEC Proceedings
Workshop of the Climate Alliance: Municipal Energy and Emissions Balancing, Workshop Folder
### Institution
Amt für Umweltschutz, Ref.f.Energie und Klima, Griesgasse 11, A-8020 Graz

### Contact
Dipl.Ing. Karl Heinz Lesch, +43 316 972658-16, FAX: +43 316 872-4309, e-Mail: afumwelt@mbox.tu-graz.ac.at

### Contents and Aims
The joining of the Climate Alliance means the Territorial Authority commits itself to halve the CO₂ Emissions by the year 2010 as compared to 1987, not to use any CFC’s, to support indigenous peoples in the sustainable utilization of the rain forest and to make the population aware of all the problems by public relations. A financial support of rain forest projects for the sustainable utilization of as well as a cooperative environmental protection with trade and industry and the population of Graz are to help to achieve the targets aimed at. The self-commitment to reduce the CO₂ Emissions also is a basic requirement for the Municipal Energy Concept.

### Present Situation and Future Perspectives
On April 22nd, 1991, the Alliance was officially ratified between the 22 founding municipalities and the representatives of the indigenous peoples of the South American rain forests.

Up to now, over 500 municipalities and territorial authorities have joined the International Climate Alliance. For the implementation, the working team Energy Change-Climate Alliance Graz (EKG - „Energiewende-Klimabündnis-Graz”) was founded. In this working team, different institutions and NGO’s are represented. The working team consults the political decisionmakers in matters of the Climate Alliance. The City of Graz has provided for an annual amount of about 7547,17 ECU for the support of the rain forest projects.

### Reference to Agenda 21
2, 4, 9, 26, 27, 38, 40.

### Documents
Vote on Joining
Institution
Grazer Büro Fr Frieden & Entwicklung
Wielandgasse 7, 8010 Graz

Contact
Mag. Regina Senarclens de Grancy
Tel: 872/2013   Fax: 872/2014

Contents and Aims:
The Graz Office of Peace & Development was installed in 1988 on the basis of a unanimous local council resolution; since then, its four full-time members of staff have been working in the field of education, information and networking of issues of peace and development.
The office has the form of an association, whose board comprises all parties represented in the local council, adult education facilities and NGOs working in the field of peace and development. An advisory board for peace office staff discussion and networking and co-ordination of activities of groups and initiatives currently comprises 30 different NGOs. (No. 27, 28)

Our education work is based on the principle of cooperation with various local and international facilities. In 1995, we collaborated with 92 different institutions. (No. 36)

Our development policy education work is aimed at conveying global interrelations, with feedback from the environment of the various target groups playing a major role. Alongside these school projects, supported by our office regard content and method, mention should be made of a seminar for multipliers that we held in May 1995. In the course of an intensive workshop discussion, aspects of sustainability in the areas of environment, agriculture, economy, social affairs and development policy were dealt with. As part of the Sura za Afrika festival, in co-operation with other organisations, we organised construction of an African clay house on the main square in Graz; here, it was possible for construction college student sot learn from African builders. (Nos. 2,4,27,28)

For many years we have invited personalities to...
speak at our series of lectures "Development and Peace Today" - particularly opposition politicians, minority representatives and indigenous peoples. For example, shortly after creation of the office, we had Jiri Hajek, former Czech foreign secretary and co-founder of the Charta 77, who had been allowed to leave the country for the first time in 20 years; and in 1990, Rigoberta Menchu, to name but a few prominent names. (No. 26)

A major part of our work is concentrated on research activities. From 1990 to 1994 we carried out the research project "urban violence" which investigated phenomena of violence in Graz. A cross-department and cross-institution work group elaborated a 150 page catalogue of measures aimed at countering various phenomena. The results of this project were published in two books which met with a tremendous international response. (No.7)

With regard to the demographic development in Graz, The Graz Office of Peace & Development drew up the refugee resolution in 1990, for example, which was later unanimously approved by the local council and was an active partner in preparing and carrying out the first Austrian election to the foreign residents’ advisory board in 1995. (No.5)

Reference to Agenda 21: 2, 4, 5, 7, 26, 27, 28, 36

Documents: Lebensraum Afrika, Information
Fighting Poverty

Armutsbekämpfung

AGENDA 21

3
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Gratuitous energy saving lamps for socially needy households................................. 12
Institution
Magistrat Graz - Sozialamt
Amtshaus, 1. u. 2. Stock, A-8010 Graz

Contact
Dr. Franz Schwarz  (0316) 872/3006
Dr. Andrea Gutmann  (0316) 872/3004

Contents and Aims
Open Social Welfare:
- Continuous and occasional benefits
- Sickness contributions
- Grants-in-aid
Closed Social Welfare:
Hospital care - bearing the nursing fees - benefits according to the Styrian Law concerning Handicapped Persons and Nursing Allowances („Steiermärkisches Behinderten- und Pflegegeldgesetz“)
Help in Special Situations in Life and Social Services:
Mobile food delivery service, Qualified Social Worker (advice, help, nursing), home aids (nursing at home), laundry service, tidying service, emergency phone;
Special Help for Aged Persons
Cultural Events
Voluntary Services of the City of Graz

Consulting Agencies: (Consulting Agencies for Debtors and for Foreigners, cooperation with private welfare institutions, e. g. Caritas)
Homes for the Aged, Geriatric Hospital and Center for Senior Citizens („Seniorenzentrum“) of the City of Graz

Reference to Agenda 21
3

Documents
Progress Report
Fighting Poverty

Project 5

Institution
Magistrat Graz, Amt für Umweltschutz,
Referat für Energie und Klima,
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Project Title
Social District Heating Subsidy

Content and Aims
As a means of promoting environmental protection, the city of Graz offers a non-refundable subsidy for private households for changing from their existing heating system to district heating. This social subsidy depends on the income per household and the number of people living in the household; it amounts to 75% or 25% of the costs incurred by the change, connection costs (house installation) excluded. Thus less well-off people can afford environmentally friendly and economic heating.

Present Situation and Future Perspectives
Since the introduction of the district heating subsidy, Graz has paid approx. 3.6 mill. ECU. Over the last five years, approx. 3.02 mill. ECU have been paid for approx. 2000 applications with an investment volume of approx. 6.04 mill. ECU. It is planned to increase the heating expenses subsidies for people receiving social security in order to avoid social hardship caused by the obligation to use district heating.

Reference to Agenda 21
3, 4, 7, 8, 9, 33, 36, 40

Documents
Instruction card
KEK report no. 19: File 9
Statistics sheet: File 33
In cooperation with the Social Welfare Office, credit vouchers for energy saving lamps will be distributed to all recipients of social welfare in September 1996. Then these credit vouchers (appr. 4000) can be cashed at the Graz Energy Info (GREIF). A good consulting talk is to ensure a useful use as well as the prescribed disposal of the lamps.

The money for the purchase of the 4000 energy saving lamps is provided for in the budget, and the Office for Environmental Protection, Department for Energy and Climate, has designed a credit voucher as well as a sheet of instructions for this project, which are already being printed. From early September to mid-October, the credit vouchers can be cashed in the Energy Consulting Office. The participation of mass media also is to help to encourage other social strata to buy energy saving lamps.

Reference to Agenda 21
3, 4, 6, 9, 30, 34, 36, 40.

Documents
Energy Saving Lamps-Credit Voucher
Summary

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Contents and Aims
The Purchasing Authority buys products totaling around 7.55 mill. ECU a year. These products range from paper, office aids and devices to cleaning agents and detergents, to furniture and EDP equipment.
In addition to work safety and worker protection, ecology, economy and ergonomics are important criteria for evaluating products in placing orders.
For more than ten years, eco-friendly purchasing of consumer goods has been a central topic at the Purchasing Authority of the city of Graz. On the basis of principles of economy such as thrift, expediency and economicalness, product assessment (quality control) is always based upon and geared to ecologically relevant aspects. Further aspects include usefulness, service life and ease of repair of products and any possible follow-up investments.
As early as 1986 numerous types of recycled paper and detergents that do less harm to the environment were tested and evaluated.
The new eco-line, still quite "unusual" at that time, initially gave rise to any number of supplier objections, prejudices and contradictions that had to be surmounted. Consistently, ecological objectives in purchasing policy were pushed ahead, purchasing staff trained and, as a result, the Ecological Section was installed at the Purchasing Authority in 1993. Environmentally friendly purchasing has now come to be a generally recognised principle and is pursued as a matter of course and accepted by users.
The fundamental requirement in this process of problem detection and solution is the readiness to conduct and accept changes and to question traditional structures.
A great deal of restructuring and constant adaptation to new environmental findings are the measures that have gained the city of Graz the model role of forerunner in ecologically-oriented purchasing policy.

By taking active steps in pursuing the objectives of environmental protection in central purchasing policy, it is possible to make an active contribution to minimising pollution; suppliers of ecologically friendly products are strengthened in the competitiveness due to public demand and first-time markets opportunities are created for new products.

**Measures implemented:**

After ascertaining and analysing the current situation, particularly ecologically harmful products are being constantly replaced and adjusted standards are being elaborated.

No products made of PVC, tropical timber, halogenated plastics and halogenated hydrocarbons and products containing formaldehyde or heavy metals are purchased.

Detailed product descriptions contain precise ecological requirements where applicable.

**01  Product evaluation**

according to circular flow system manufacture, use, disposal

**02  Paper and office material**

since 1986, paper tests, gradual change-over of entire paper and stationery purchases to meet ecological criteria (recycled paper, certain types of paper bleached without chlorine; biros with refills, unlacquered pencils, PVC-free utensils and storage systems, water-soluble tipp-ex and much more).
03 Cleaning agents

since 1987 various tests also under the aspect of user-friendliness and health protection; economical use and minimum of harmful chemicals are at the top of the list of priorities.

1990 - product range of detergents and cleaning agents cut back by half; evaluation of calls for tenders for annual amounts on the basis of a negative list of contents and with the collaboration of the chief regional hygiene officer in analysing ingredients;
Requirements set to suppliers:
Declaration of contents, safety data sheet, indication of degradation values, pH value and dosage per product.

04 Studies

for eco-assisted purchasing

4.1. 1989/90 "Environmentally friendly purchasing and innovation of municipal infrastructure";
4.2. 1990/91 "Survey of companies in the Graz area - The influence of ecological purchasing by public authorities in Graz on the services and products of regional companies;
4.3. 1991/92 "Ökopolis" project - PC software for supporting ecological purchasing with product information concerning environmental relevance with chemical analysis.

05 Discussions

and exchange of interests as of 1990 with comparable purchasing authorities in other cities and also with various companies and institutions.

06 Lectures

Ecological purchasing measures have induced a number of other cities to emulate which is why
the Purchasing Authority has been invited to hold lectures in co-operation with the Austrian Association of Cities.

07 General ordinances
The head office of the municipal authorities has issues internal instructions in the form of general ordinances such as No. 16/89 - Use of Eco-Friendly products; No. 15/85 - Waste Paper Collection; No. 37/90 - Pilot Trial Waste Separation; No. 17/92 - Change of Contract Awarding - Ecological Purchasing etc.
LC resolution: Change of Contract Awarding Regulations of 27.2.1992

08 Training
The Ecological Section organised a set of training units for the cleaning, kindergarten and day-home personnel.

The Chief Regional Hygiene Officer dealt with major subjects such as chemicals in cleaning agents, dosage, worker protection, and environmental relevance of cleaning agents.

09 Humanisation and modernisation of workplaces
Workplace layout and working environment design are substantial factors of environmental protection and are determining factors in health care and motivation. Low-noise and low-radiation equipment, ergonomic work chairs and table systems and workplace-suitable lighting systems have been purchased since 1986 on the basis of workplace analyses.

10 Old furnishings
Furnishings no longer used by individual offices can be requested by other departments with the
aid of a furniture depot brochure.  
In this way, products are used for many years (waste reduction).

11  **Eco-info-stand**
Every year the Purchasing Authority takes part in the “Open Day” event, offering the public the opportunity of getting information on the subject of "ecological purchasing". Brochures (see enclosure) and various aids (pencils, paper, literature etc.) are presented.

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</table>
Institution
Magistrat Graz, Amt für Umweltschutz, Referat für Energie und Klima, Griesgasse 11, A-8020 Graz.

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Project Title
"Model Family"

Content and Aims
On the basis of the "Bremer Low-Energy House" the aim is to equip a family of 4-5 with energy-saving household appliances and thus to present to the public in an effective PR style:
- the possibilities of efficient energy use by means of state-of-the-art technology,
- to what extent this provides the possibility of reducing CO2 emissions and
- how we can gain practical experience on the basis of a real example and translate this into counselling practice.

By replacing an old, worn-out appliance with a new efficient one, we can avoid unnecessary waste of energy.

By selecting suitable appliances, fridges or refrigerators, for example, it is possible to save the initial investment costs across the whole service life of the appliances.

Present situation and Future Perspectives
A competition was held at the start of the year in the customer magazine of the Grazer Stadtwerke AG.

The selection of the most suitable families, according to the electrical appliances employed, has yet to take place.

By presenting and accompanying this project in the media in a suitable manner, the aim is not only to show the practical efficiency of modern appliance technology, but also to improve our (virtually non-existent) awareness of our own energy consumption in the home.

Reference to Agenda 21
4, 8, 9, 34, 36, 40.

Documents
Customer magazine of the Grazer Stadtwerke AG
Institution
Mag.Abt. 23-Amt für Umweltschutz, Ref. für Energie und Klima, Griesgasse 11, A-8020 Graz
GLOBAL 2000, Regionalgruppe Steiermark, Energiereferat, Bischofplatz 1/1, A-8010 Graz

Contact
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Erwin Greiler, +43 316 818309

Project Title
Energy Saving Project „25 % Less Power Consumption with a Maximum Investment of 754,7 ECU - demonstrated by means of 10 sample households“

Contents and Aims
This project is to show that considerable potentials for saving energy can already be achieved with relatively low investments. Specific measurements in households help to find and implement efficient as well as economical potentials for saving energy by comparing ACTUAL and DEMAND Values.

Sequence of the Project:
1. Looking for 10 households in Graz.
2. Determining the ACTUAL State of the current power consumption.
3. Comparing the values from 2. with an „Efficiency Table“ prepared for the respective household (supply with the same services by more efficient equipment as well as general information on a use of energy that is as efficient as possible).
4. An investment consulting of the households in combination with a profitability analysis (Maximum Investment Sum: 754,7 ECU)
5. Determining the energy saved by this by means of calculations and metrology

Present Situation and Future Perspectives
- Currently the households are being selected.
- Writing a Result Brochure that illustrates the results of the project in a way that is generally understandable and traceable.
- Reference to Agenda 21
  4, 7, 9, 27, 28, 30, 31, 34, 36, 40

Documents
KEK Report No. 19; Folder 9
In the course of the next ten years, low-energy construction methods should become the accepted standard for new buildings in Graz. Low-energy construction involves, among other things, active and passive use of solar energy, increased heat insulation, etc. In 1996 the so-called Graz Heat Pass was introduced for assessing the quality of buildings. The pass shows object identification, object description, thermal data such as building heating load, passive and active solar profit, collectible energy data, specific CO2 emissions and is given to buildings for which the Graz solar-low-energy-building subsidy is provided.

It is the aim of the Graz Heat Pass to point out poor thermal characteristics of existing buildings and their high energy consumption and emissions. The Heat Pass should become a decisive decision criterion for renting and/or buying a house and serve as an incentive to build low-energy houses. As of 1998, all new buildings in Graz should be given such a pass.

Reference to Agenda 21
4, 7, 8, 9, 30, 34, 36, 40

Documents
KEK report no. 19: File 9
Newspaper articles
Graz - Heat Pass
Institution
Magistrat Graz, Amt für Umweltschutz,
Referat für Energie und Klima,
Griesgasse 11, A-8020 Graz.
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Project Title
"On the Trail of Energy Eaters"

Content and Aims
Free hire of ammeters is to clarify the energy situation in private households. By measuring the energy consumption (power input, energy consumption, on times etc.) of individual appliances - above all in the home - it is possible to assess the often unnecessary waste of energy caused by one’s own electrical appliances by comparing with the best values. Especially the still largely unknown stand-by electricity of many consumers such as TVs, video recorders, hi-fi systems etc. can be recorded and quantified.
The ammeters can be hired free of charge at the Grazer Energie Info, the Energy Advice Centre of the City of Graz, and the Grazer Stadtwerke. After presenting the recorded data, it is then possible to assess the necessity of buying any new appliances in co-operation with a specialised adviser at the energy advice centre.

Present situation and Future Perspectives
Currently, 12 ammeters are available at the Grazer Energie Info - 2 since 1990. These devices are virtually in constant use.
Knowing about your own energy consumption and "unmasking" the worst energy-eaters in the home is a major contribution to heightening awareness and can also help avoid many a power plant.

Reference to Agenda 21
3, 4, 8, 9, 34, 36, 40.
In May 1995 this programme of climate protection and public awareness building, developed by Dr. Prosc at Kiel university, was started in Graz too. Basically, what is involved is providing information about associations, institutions, networks etc. in which the public can simply obtain information specifically on energy and hot water saving. A special focus is on use of low-energy bulbs.

The start-up event for this campaign took place at the main square in Graz in May 1995, in collaboration with NGOs and schools in Graz. The aim is to trigger Austria-wide energy-saving activities for the wide public. The plan is to have the Institute of Electrical Facilities at Graz University of Technology take charge of this campaign for the future.

Reference to Agenda 21
4, 8, 9, 25, 27, 36, 40.

Documents
Falterm: Nordlicht campaign
Institution
Magistrat Graz, Amt für Umweltschutz,
Referat für Energie und Klima,
Griesgasse 11, A-8020 Graz.

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Contents and Aims
This project, which is executed in cooperation with the Technical University of Graz, Department for Electric Installations, and the Trade Specialized in Electric Appliances in Graz, aims at helping the consumer in his purchasing decision by giving him information on the power consumption and, above all, the annual operating cost of the equipment. Dealers specialized in electric appliances who take part in this project complete all statements of purchasing prices on the boards of the shops but also leaflets and folders by stating the annual electricity cost caused by this equipment. In addition, the entire personnel is correspondingly trained by the Institute for Electric Installations so that they are better qualified to consult the consumer for his purchase. The project aims at considerably increasing the share of Category A Instruments according to the European label as compared to the other categories.

Present Situation and Future Perspectives
The projects is to be executed with 1 to 3 dealers in Graz for one year. These dealers are to be correspondingly supported in their advertising activities by the Office of Environmental Protection. After this one year’s trial period, the project is to be evaluated and adapted so that it can be propagated in the entire trade specialized in electric appliances. Currently the Institute for Electric Installations is entrusted with preparing and calculating the annual electricity cost and training the personnel. The go-ahead is to be given in early November 1996 so that this can already act upon this year’s Christmas business.

Reference to Agenda 21
4, 8, 9, 30, 33, 34, 35, 36, 40.
Institution
Amt für Umweltschutz,
Referat f. betriebliche Umweltvorsorge
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Contact
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Ing. Daniela List  -13

Aims and Contents
This working group aims at showing the advantages and disadvantages of this new packing for beverages as to material properties, environmental compatibility, waste logistics, etc., or putting it up for discussion in order to allow the consumer to objectively compare it to other packing systems.

Present Situation and Future Perspectives
Since June 1994, milk has been available in the 1l - light deposit bottle made of polycarbonate. Starting from a critical comment of the Department of Preventive Environmental Protection in Companies (chlorine chemistry!!!), a working group has been founded. This group does not only include the producer and distributor of the bottle but also representatives of authorities and of Austrian Environmental Organizations.

Regular working meetings at which the latest data and facts on this packing of beverages are presented and discussed by the different parties are to guarantee the continuous observation of this „ecologically questionable product“.

Reference to Agenda 21
4, 40

Documents
Institution
Magistrat Graz, Amt für Umweltschutz,
Referat für Energie und Klima,
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Content and Aims
Grazer Energie Info provides independent consultation and advice in energy matters free of charge. The service is offered to the population and economic enterprises in Graz in order to make them aware of environmental influences and purposeful use of energy. GREIF offers services such as general information and advice on energy, information on low-energy construction methods, alternative energies, insulation, subsidies, solar energy, calculation of head loads, K-values, energy data, etc. free of charge.

Present Situation and Future Perspectives
GREIF is operated in cooperation with the Grazer Stadtwerke AG which is responsible for the infrastructure. The office is run by two employees of the Department of Environmental Protection for 2 hours per day. On Wednesdays, there are four hours of special consultation in solar energy issues. When the Graz Energy Agency is founded, the energy consultation service will become part of this agency and will be increased in the framework of implemented energy projects of Graz.

Reference to Agenda 21
4, 8, 9, 34, 36, 40

Documents
Information material
In Graz, current data from six measuring points (Graz centre, north, west, southwest, south and east) are registered and collected at thirty minute intervals, 24 hours a day and evaluated for the air quality report. Since December 1994, this data has been sent to the new Air Quality Information Board in the centre of Graz via a telephone line. Since 1995, this information, together with other environmentally relevant information, is also broadcast via the local TV cable network. The project aims at showing the citizens of Graz the quality of the air they breath in a drastic and obvious way. The display is easy to read and understandable for everyone.

The following air pollutants are indicated:
- Sulphur dioxide
- Nitrogen dioxide
- Carbon monoxide
- Ozone
- Dust
and meteorological data

Present Situation and Future Perspectives
The purpose of the information board is the promotion of the citizens’ acceptance of necessary environmental protection measures and increased transparency. In future, further information boards will be put up depending on requirements. Currently, distribution of the air quality data via Internet is being planned.

Reference to Agenda 21
4, 7, 36

Documents
Information material
Newspaper articles
Aims and Contents
The Waste Consulting Agency of the City of Graz was installed in 1983 to achieve the avoidance of waste by the consumers by information and consulting of the population of Graz. Since 1986, the „Working Group Avoidance of Waste“, which has its seat in Graz, has trained Waste Consultants for fulfilling this task. At this time, the City of Graz was the first Austrian city to employ trained Waste Consultants in the Waste Advisory Board. Since 1986, four (today 6) Waste Consultants have been on duty. Waste Consultants want to inform people on the possibilities of saving the environment and the resources, the qualitative and quantitative avoidance of waste and to promote or allow recycling or sustainable utilization by motivating people to a socially compatible, ecological and economical use of goods.

Present Situation and Future Perspectives
Today waste separation is institutionalized in Graz, and six Waste Consultants consult people on the following topics:
* Qualitative and quantitative avoidance of waste
* Chemistry in the household and alternatives
* Compost preparation (in one’s own garden and even in housing estates)
* Separation and use of waste
* Packing Decree
* Waste management in companies

in the form of projects, campaigns, exhibitions and events, by personal and phone consulting, slide lectures, papers, seminars;
by incorporating the media, cooperating with local initiative groups, associations and organizations.

Reference to Agenda 21
4, 25, 36

Documents
Information Folder: „Energy Advisers of Graz“
### Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

### Project Title
Partnership project
for the avoidance of waste

### Contact
Wirtschaftshof 0316/29 56 25

### Contents and Aims
This project was executed in a housing estate with approx. 2200 inhabitants from 1992 to 1994 in order to try specific measures for motivating the inhabitants to avoiding and separating waste.

- Contractor: City of Graz
- Subsidized by: Federal Ministry for Environment, Youth and Family Province of Styria
- Executed by: Waste Consulting Agency Working Group Waste Avoidance Institute for Interdisciplinary Research and Education

**Aims**
Model for further projects for the avoidance of waste:

- inquiring the acceptability of measures in waste management;
- showing what consumers / trade / politics can achieve in waste avoidance with good will;
- reducing the total waste produced in the project area;
- qualitatively and quantitatively changing the total waste by a changed consumer behavior oriented towards the environment;
- making men participate more;
- changing the offer of a food store by a changed consumer behavior;
- examining different methods of public relations for waste management as to their efficiency
Present Situation and Future Perspectives

- There is a readiness to take measures that do not require much additional expenditure in time or do not require additional expenditure in time at all and are aimed at a private active avoidance of waste (buying eggs without packing, cancelling unaddressed direct mail, collecting problematic substances, having a better separating behavior).
- The collective behavior in the housing estate has been influenced by the massive advertising activities, above all by the „Ökolotto“ Game (Ecological Lotto).
- The slight waste avoiding effect in the total statistics can primarily be traced back to the common compost preparation.
- Professional PR or Marketing Methods should be used more intensively in municipal waste consulting. These methods alone can help to achieve a significantly higher efficiency of municipal services in waste management that can definitely justify the higher cost.
- Communication concepts have to make more use of the social multiplication centers of information, such as schools and nursery schools. For locally limited projects, the presence of such centers is the basic requirement for the exterior success.
- New communication measures should be started in schools and nursery schools so that they can be concentrically extended to the entire population. (Exception: target group specific measures)
- Being constantly present in the media with new sensation effects (tombolas, surprises, out-of-the way activities) keeps people alert.

Reference to Agenda 21

4, 36

Documents

Project Report (short version)
In the late 80’s, several stickers circulating in Austria were to make distributors of advertising material aware of the fact that their leaflets were undesired. By means of this measure taken in cooperation with the Environmental Office and the „Wirtschaftshof Graz“, the City of Graz has made still another contribution to the avoidance of waste. The sticker has deliberately not been printed on PVC as base material. In the meantime, the Austrian Mail has already reacted to this „non-existing demand“ and offers the possibility to express one’s refusal to accept advertisements delivered by mail by putting a special sticker on the mailbox.
Contents and Aims
The Waste Consulting Agency purchased all products of the food, cosmetics and detergent industries whose packing was “PVC suspicious” in DM Markets („Drogeriemärkte”) and in supermarkets selling food. For all the plastics packing for the a/m products, a Registered Consulting Engineer for Technical Chemistry made a Beilstein Test. This test showed what packing material actually was made of PVC. Due to these test results, the Waste Consulting Agency has prepared a positive list (product packing without PVC) as well as a negative list (product packing made of PVC).

This test was made again after one and a half years with the same products as well as with the new products.

Furthermore, the Waste Consulting Agency started a signature campaign in which the total ban of PVC in packing material was demanded.

Present Situation and Future Perspectives
The negative list as well as the positive list were passed on to the consumers. They were also available in all consulting and information offices that were interested in environmental protection.

The list of signatures was laid open at all events and fairs. Furthermore, active citizens collected signatures for our campaign.

Thus we made a little contribution to the fact that no PVC has been used for packing material for household products for some time.

Reference to Agenda 21
4, 21, 35

Documents
Expertise on the execution of the PVC Test
2 lists of the products containing PVC
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Wirtschaftshof 0316/29 56 25

Contents and Aims
The „Wirtschaftshof Graz” offers the population of Graz the possibility to deliver the used cooking oil and fat at the stationary and mobile collecting stations for problematic substances. The cooking oil and fat that are collected separately serve as valuable raw materials for the production of ecological diesel („Ökodiesel“), solvents and chemical base materials.

Present Situation and Future Perspectives
By July 1996, 6 housing estates were incorporated into the program for collecting used oil. The size of the estates is between 40 and 550 dwelling units. Within the project, the incorporated households were equipped with containers for collecting used cooking oil (FETTY). Furthermore, information events relating to this topic were held.

Reference to Agenda 21
4

Documents
- Information material
- FETTY (container for collecting used cooking oil) with information on the collection
### Contents and Aims

6 instead of Waste is part of an image-building concept for the avoidance of waste. The contents related target is to transport the following messages:

- Avoiding waste increases the quality of life
- Avoiding waste is intelligent
- Avoiding waste - a positive concept

Different target groups are approached with these messages by different messages. All waste collecting vehicles and waste containers of the City of Graz also are labelled in this sense. In cooperation with an Artists’ Association, campaigns relating to the Topic „Waste Avoidance by Artists” that are to be distributed over two years will be elaborated by artists and implemented together with the Waste Consulting Agency. The campaigns with the Title „6 instead of Waste“ are to attract people’s attention; potential confrontations are deliberately put up with, the campaigns are to startle people, arouse their interest and encourage discussions.
Present Situation and Future Perspectives

6 instead of Waste means:

6 Waste Consultants strive for making people aware of and informing them on the Topic „Waste Management“ and, in particular, „Waste Avoidance“.

6 partners, private Companies and Companies owned by the City are working on implementing tasks in waste management.

6 artists have, within this campaign, dealt with the Topics „Waste, Waste Avoidance“ and „6 instead of Waste“.

6 waste containers as artistic objects are designed for being put up in public.

6 theses for waste avoidance are to hint at economic and social correlations.

6 operating instructions for avoiding waste show possibilities to deal with this topic and implement it free of charge.

In the future implementation of the advertising campaign, further „instead of“ statements, which hint at alternatives and other behavioral patterns instead of waste production and action detrimental to the environment, will have to be made.

For the time being, the following measures are being implemented:

Waste Exhibition - 6 waste containers designed by artists as exhibition on a Square in the city center of Graz

Mobile Exhibition with HORST JOP - concept art exhibition in a streetcar

Fillip on the nose - mobile smell presentations

Reference to Agenda 21

4, 36

Documents

Poster to the „Waste Exhibition“
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Wirtschaftshof 0316/29 56 25

Project Title
Household consulting with a questionnaire in 2 Districts of Graz

Contents and Aims
In the Districts Geidorf and Gries in Graz (2 different social strata), there was an inquiry with a subsequent consulting in altogether 350 households. In the consulting talks lasting for one to two hours, a questionnaire served to discuss the aim and object of offers available for a separated collection of waste and the collection of problematic substances as well as the possibilities for avoiding waste and composting and to determine the extent to which the relevant offer of the City was known.

Present Situation and Future Perspectives
The evaluation showed that the population wanted the Waste Consultants to come to their houses. If Waste Consultants visited every household in regular intervals, it would be possible to correspondingly make people aware of issues in the avoidance and separation of waste. However, this would have required an enormous expenditure in personnel and time. In the meantime, the consulting has been converted to the person looking for advice contacting the relevant offices. Since that time, all services offered by the „Wirtschaftshof“ or the Waste Consulting Agency of Graz have, to an increasing extent, been communicated by intensified public relations.

Reference to Agenda 21
4, 36

Documents
Questionnaire to the Topic:
Collection of problematic substances (special waste)
Avoiding (separating, using, composting) waste
Energy (heating and hot water preparation)
List and statistics of the delivered quantities of problematic substances
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Wirtschaftshof 0316/29 56 25

Project Title:
Investigation into products in supermarkets

Contents and Aims
The Waste Consulting Agency of Graz has, in all supermarkets, investigated into the products that are defined as problematic substances for disposal.
Furthermore, the kind and size of packing as well as their contents (their hazardousness) were determined.

Present Situation and Future Perspectives
This has made it possible for us to correctly assign the waste of these products to the correct groups of substances at the collections of problematic substances.

Reference to Agenda 21
4, 36

Documents
18 lists - PROSA Assignment of groups of substances
**Contents and Aims**

More and more people working in offices (in the interior) are suffering from irritations of the mucous membranes and such disturbances as lack of concentration, premature fatigue, oversensitivity, nervousness, a head ache. Among other things, these symptoms result from the fact that wrong office equipment is used in a way that is not ecologically compatible. The great number of substances present in the room air is the reason for the impacts of combinations of pollutants that may affect people’s health and the environment. These negative impacts result from: exhalation of building material (sheathing, furniture, colors, glues, insulating material), e.g. formaldehyde from chipboards, perchlorethylene from chemical office cleaning, solvents from paints. For further nuisances on the workplace, solvents from glues and felt-tipped pens of any kind as well as softeners and flame retardants in plastics and finally radiating screens and ozone emissions from copying machines and laser printers are responsible.

A reduction in the content of pollutants in the interior and thus the creation of a healthy room climate require a critical use of products and the responsible participation of all.

Today many companies already offer products that are less detrimental to the environment. Wherever it is possible, ecologically beneficial products should be used.
Present Situation and Future Perspectives

The leaflet relating to this topic that has been issued by us gives a survey on possible alternatives as well as hints for the correct disposal of: paper goods, stationery, glues, correcting lacquers, stamps and stamping inks, computers and screens, printers and typewriters, copying machines, laser printers, lighting, cleansers and detergents and the correct separation and disposal of office waste.

Reference to Agenda 21
4, 36

Documents
Leaflet: „The Ecologically Beneficial Workplace“ (office and administration)
Folder: „The Ecologically Beneficial Adviser“ (office and administration)
Information Sheet: „Ecologically Beneficial Purchasing in Companies and Institutions“
Contents and Aims
Avoiding waste means producing less waste. Therefore, it is already when buying that we have to consider the impacts of the products and that we should try to select only products whose packing (if it is necessary at all) can be disposed of or reused or recycled in an ecologically beneficial way.

However, avoiding waste also means that consumers have to consider the „quality“ of the products. This refers to the household, to handicraft, to the garage, to the garden, etc. Everywhere we have to use ecologically beneficial substances in the sense of a „qualitative avoidance of waste“.

We have to keep in mind: The more household chemicals we leave out, the better we protect ourselves and our environment. And we can do this here and without any special efforts.

We have used our extensive experience of the past and the present to select those recipes that save the environment and also take into account our present need for cleanliness. Besides, self-made detergents and cleansers are very cheap. They only contain the raw materials that are really necessary for cleaning but no unnecessary colorants, fillers, odoriferous agents and preservatives. As aggressive chemical substances are not used, the detergents are gentle and still thorough. Still another reason to produce our detergents and cleansers ourselves is the fact that it is only with self-made detergents and cleansers that the contents are fully known to us.
Present Situation and Future Perspectives

This leaflet shows us with simple hints and recipes where we can start to make our working area as free from poison as possible. The leaflet offers 155 hints and 110 recipes for the simple and cheap production of ecologically beneficial and efficient detergents and preservatives. More than 6000 pieces of these leaflets have been requested by people in Graz. Therefore, a next issue is being planned.

Newspaper Articles:
Bürger-Information-Graz
„Cleaning Biologically“
Kronen Zeitung
„Producing Detergents Oneself“
Neue Zeit
„Ecologically Beneficial Detergents and Cleansers“
Graz Magazin
„Recipes for Ecologically Beneficial Detergents and Cleansers“
Der Grazer
„Information Brochure - Self-Made Cleansers“
Gemeindeblatt
„Hints and Recipes for Ecologically Beneficial Detergents“
Kleine Zeitung
„Cleaning in an Ecologically Beneficial Way“

Reference to Agenda 21
4, 36

Documents
Leaflet:
Ecologically Beneficial Detergents and Preservatives
„Do-It-Yourself“ Hints and Recipes
Aims and Contents

Constant presence is also an essential element of public relations relating to measures in waste management. For this reason, it is also the collection lorries that are used to communicate messages on the avoidance or separation of waste.

The collection lorries have been labelled with slogans relating to this topic:

„Avoiding waste is your decision“, „Buy milk in the glass bottle“, „Collection of used paper“ „Collection of used glass“, „Glass is „recyclable““, „Compost is humus for tomorrow!“ „Poison in Your Waste? - No, thank you.“

Present Situation and Future Perspectives

An advertising campaign for boosting the image of waste Consulting and the services of the „Wirtschaftshof“ is being prepared.

Reference to Agenda 21

4
Aims and Contents
Consulting on the phone is an important instrument of a working and efficient consulting on waste.
The Waste Consultants of the „Wirtschaftshof Graz“ can be reached on the phone on workdays from 8 - 14.00 hours.
For the rest of the time, the population of Graz can get information from
a) a telephone answering machine for inquiries, suggestions, wishes, complaints, etc., of the Waste Advisory Board
b) a Service Telephone for Waste Disposal by the Austrian Post Office, which can give various information, e. g. on the separated collection of bulky waste.
These topics of the inquiries (see statistics 1993 - 1995) are very diverse. They range from waste avoidance and separation via compost preparation to waste incineration.
Many inquiries can be dealt with immediately. However, technical information often requires extensive investigations.

Present Situation and Future Perspectives
Keeping the telephone service for the population of Graz.
Modification or partial renewal of the telephone installation so that the quick availability remains.
Shortening the waiting time for callers when the telephone lines are overloaded.

Reference to Agenda 21
4,36

documents
Statistics 1993 to 1995
Summary

„Project 2000 - School Health Program“ ......................................................... 48

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Pilot Project on the Use of Bioindicators of Atmospheric Pollution in Urban Areas ........ 62

Registration of Dust Emission ......................... 63

Subsidies for sound insulating windows ....... 64
Institution
Magistrat Graz, Amtshaus, 3. Stock,
Amt für Jugend und Familie,
A-8010 Graz

Contact
Doz. Dr. Max Haidvogl . 872-3160
(Mag.Abt. 6, Ärztlicher Dienst)

Project Title
„Project 2000 - School Health Program”

Contents and Aims
A completely novel health project was started in six primary and secondary modern schools in Autumn 1995: „Project 2000“ - an extensive long-term health program. In cooperation with teachers, parents and the school medical officer, health is to be a central topic for four years: On the one hand, many examinations are to detect possible physical problems soon enough. On the other hand, the health consciousness of the children and parents is to be increased.

Faulty postures, ruined teeth, impaired vision, allergies - the health related problems of children and adolescents - are increasing more and more as is shown by examinations made by school medical officers. However, many of these problems might be prevented by preventive measures or by taking countermeasures as soon as problems emerge. For it is, in particular, in the growth and developing stage that prevention in combination with corresponding efforts to arouse the childrens’ awareness by using their language is of utmost importance.

And this is exactly what the „Project 2000“ developed by Dr. Susanne Gregoritsch from the Service of School Medical Officers in the Office for Youth and Family of the City of Graz aims at - prevention and increasing the health consciousness of children but also that of their parents. Since Autumn 1995, Dr. Gregoritsch has executed this project in the first forms of the Primary Schools („Volksschulen“) Nibelungen, Felix Dahn, Leopoldinum and Algersdorf, at the „Neue Mittelschule“ Algersdorf as well as at the „Sporthauptschule“ Graz.
The most important cornerstones of the „Project 2000“:

- exact internal examinations at the beginning of every school year (size, weight, thyroid gland, skin, heart, lungs, abdomen, genitals)
- exact orthopaedic examination (supporting function of the vertebral column) by OA Hausbrandt
- regular progress inspection by Dr. Gregoritsch
- sports medical examinations in cooperation with the Univ.Clinic for Children’s Surgery (ao Univ-Prof. Dr. Schober) for the Competitive Soccer Group („Leistungsgruppe Fußball“) of the „Sporthauptschule“
- posture gymnastics with trained teachers and diagnostics / allocation / observation / inspection by Dr. Gregoritsch with the support of Prof. Rudolf Punkenhofer and Prof. Evelyn Erlitz-Lanegger
- participation of the children by their keeping their own working files
- regular parent-teacher meetings with information and further education
- project work relating to such topics as nutrition, drug prevention, smoking, alcohol, first aid, healthy snack with the support of the Medical Service during the lessons
- accompanying documentation and publication of the results by the teachers

Altogether 260 children of the first classes will be integrated into the „Project 2000“.
Ways of Presentation:
Folders, stickers, information for parents and teachers, press work

Present Situation and Future Perspectives
The „Project 2000“ started in Autumn 1995 and is intended for altogether four years.

Reference to Agenda 21
6

Documents
Press articles
**Institution**
Magistrat Graz, Stadtschulamt,
Wielandgasse 7, A-8010 Graz

**Project Title**
Prevention of addiction in secondary modern schools („Hauptschulen“) in Graz

**Contact**
City Councillor Tatjana Kaltenbeck.
872-2070

**Contents and Aims**
At the beginning of January 1996, the Drug Consulting Agency („Drogenberatung“) of the Province of Styria was entrusted with starting a long-term extensive project for preventing addiction by the Municipal Supervisory School Authority („Landesschulrat“). This project goes much beyond the usual lectures and is made up of such modules as those for the further training of teachers, workshops of adolescents and work with parents. This new model already starts with the ten-year-olds and offers crucial subjects adequate for all age groups.

The fact that Graz has a drug scene is uncontested. And the „consumers“ are becoming younger and younger. Today it is already 12 and 13-year-olds that risk starting taking drugs. In this context, alcohol and various pills are considered as being particularly dangerous because it is quite easy to get them. Therefore, drugs and addiction are problems with which the secondary modern school is increasingly being confronted. An efficient prevention of addiction already has to start where the deficits that might lead to the consumption of drugs later start to develop. This means the increase in such vital skills as communicating, coping with conflicts, establishing and maintaining contacts, acting is of utmost importance. In this sense, the Drug Consulting Agency of the Province of Styria has been entrusted by School City Councillor Kaltenbeck with elaborating a new extensive prevention concept in a modular system for 10 to 14-year-olds. This project provides for annual priorities in discussing the prevention of alcohol consumption and addiction for all age groups.
These priorities are:

- Consumer orientation (5th form)
- Coping with conflicts (6th form)
- Keeping relations (7th form)
- Information on addiction (8th form)

In this context, it should be noted that the pupils are not the only target group, the teachers, parents and the Institution School itself being approached. The advantage of this model is that the modular system allows the participating schools to set priorities themselves according to their commitment and the settings. According to Ms. Kaltenbeck, this new project costs about 7547,17 ECU.

**Present Situation and Future Perspectives**

The go-ahead was given on January 8th and 9th, 1996, with introductory seminars for teachers. The following modern secondary schools (HS - „Hauptschule“) have decided to take the entire modular system for the first year: HS Engelsdorf, HS St. Peter, HS Elisabeth, HS Albert Schweitzer, HS Renner, HS Kepler, HS St. Andrä und HS Fröbel, the latter being particularly interested in a special further training of the teachers within the school. Further secondary modern schools have already announced their interest in single modules.

**Reference to Agenda 21**

4,6,25

**Documents**

Press articles
Contents and Aims

The Graz Health Department began to offer advice to the inhabitants of Graz, knowing of the great significance of preventive medicine. For example, an advice centre for questions of diet, smoking and blood pressure was installed to combat cardiovascular illnesses which number among the most widespread diseases in Austria as in all other civilised societies.

A team of experts comprised of various professions, in addition to doctors, nutritionists, dietary consultants, social workers and psychologists, provides a wide-ranged, extensive network of advice services.

The aim is to inform the population of Graz about sensible and healthy living but also to emphasise personal responsibility with regard to health, so as to reduce or rule out known risk factors.

In addition to these advice services aimed at preventing cardiovascular diseases, assistance is also offered to those with alcohol or drug abuse problems; this assistance is not only limited to the abuse of medicaments and drugs and addiction behaviour but also includes gambling addictions.

Taking into account the increasing significance of influences on human well-being as caused by weather conditions, the city of Graz opened a medical-meteorological advice centre, the second after Vienna; this service offers assistance to all meteorosensitive persons.

At the same time it was possible to combine all the above advice services at one specially designed centre and thus to provide a separate health care centre to the inhabitants of Graz; all services are provided free of charge.

In addition to these advice services, the Health Department has carried out a number of health care actions for example the "Too much sun isn’t
fun” action in collaboration with the municipal swimming baths aimed at preventing malign skin diseases. Information sheets pointing out possible dangers are handed out to the bathing guests. By handing out brochures to dog owners when they come to pay their dog tax, the “Dogs in the city” action was aimed at improving city hygiene and thus, again, with an eye to health care.

Current advice services
Nutrition
Smoking
Alcohol and addictions
Meteorosensitivity
Antenatal care - birth preparatory courses

Present Situation and Future Perspectives
Expansion of advice services - for instance advice on trips abroad, domestic hygiene and building biology

Reference to Agenda 21:
6

Documents
Folder
Institution
Magistrat Graz
Amt für Lebensmittelaufsicht und Märkte
A 19 - Markamt
Schmiedgasse 26, 8010 Graz
Contact
OAR. Harald Kahr 0316/872-5200
AR. Ing. Heinz Pachler 5211

Contents and Aims
The activities of the Foodstuffs Inspection Office at the Department of Foodstuffs Inspection and Markets guarantee protection of the public in Graz within the scope of existing foodstuffs legislation and ordinances (in the sense of No. 6) - Protection and Promotion of Human Health.
The fundamental task of the Foodstuffs Inspection Office is to protect the population of Graz from harmful, rotten, unripe, copied, adulterated or impaired or wrongly declared foodstuffs by means of targeted foodstuff monitoring in certain cases necessitating taking official specimens to be passed on to the competent analysis institutes.
Foodstuffs Act 1975, Wine Act 1985, Foodstuffs hygiene Ordinance and numerous other ordinances and laws.

Present Situation and Future Perspectives
The Foodstuffs Inspection Office of the city of Graz performs its duties with a great deal of commitment with the aid of the available monitoring bodies in the sense of the existing and future Federal decrees (e.g. specimen and revision plan) and other ordinances and laws. By expanding and using modern computer technology, it will be possible to increase the efficiency of the monitoring measures in future.

Reference to Agenda 21
6

Documents
Information material and law gazettes
Contents and Aims

The Mushroom Advice Centre, a free service of the city of Graz managed by the Department of Foodstuffs Inspection and markets partly goes to fulfil No. 6) - Protection and Promotion of Human Health.

This Mushroom Advice Centre, which demands exact distinction of poisonous toadstools and edible mushrooms to be found in the local woodlands, is visited by 500 to 700 persons per year; the classification criteria are edible, inedible, suspicious, useless, poisonous. Moreover, attention is also brought to the essential ecological significance of the various species of mushroom.

Brochures are distributed to people seeking advice: ”Small Guide for Mushroom Lovers”, civil defence section ”Poisonous Toadstools”, advertisement of training events and mushroom trails and others.

Present Situation and Future Perspectives

The Mushroom Advice Centre of the Department of Markets, which has been in existence for more than 40 years, will continue its activities aimed at protecting the population of Graz and Styria with a great deal of responsibility, attempting, wherever necessary, to further improve current standards with the aid of increased mushroom trails and similar events.

Reference to Agenda 21

6

Documents

Handout “Mushroom Advice”
Institution
Mag. Abt. 23-Amt für Umweltschutz, Referat für Luftreinhaltung und Chemie

Contact
DI.Dr. Werner Prutsch, +43 316 872-4310
Hannes Binder, +43 316 872-4311

Content and Aims
The environmental laboratory, founded in 1994, provides findings of long-term measurement programs (e.g. benzole, perchloroethylene, dust) and analyses of individual samples taken during general assessment work.

In addition to the standard wet-chemical instruments, the laboratory is currently equipped with a gas-phase chromatograph (FID, ECD), a polarograph (for analysis of heavy metals) and the most modern disintegration means (e.g. microwave pressure disintegration).

Possibilities of analyses by external laboratories are always taken into consideration (above all when it comes to buying analytical instruments).

Present Situation and Future Perspectives
For the future, continuous expansion of samples, purchase of further analytical instruments and further technical training of the laboratory staff are planned.

Reference to Agenda 21
4, 6, 7, 9, 36
**Institution**
Mag. Abt. 23-Amt für Umweltschutz, Referat für Luftreinhaltung und Chemie

**Project Title**
Integral Monitoring of Air Quality by means of a Remote Sensing System

**Contact**
DI.Dr. Werner Prutsch, +43 316 872-4310
Hannes Binder, +43 316 872-4311

**Content and Aims**
The spectroscopic DOAS method is based on the fact that light can be absorbed by gas molecules. Every gas has its typical absorption spectrum based on which it can be unambiguously identified. A xenon arc lamp is used as a light source and placed up to several kilometres away from the detector. Since this measuring method is based on a physical principle and not on chemical analysis, all gases absorbing in the near UV and visible light range can be examined. The device of the Institute of Meteorology and Geophysics of the Graz University is specified for the following trace gases:

- NO₂, NO₃, O₃, SO₂, HNO₂, HCHO, BrO and IO

In addition, aromatic carbon compounds (e.g. benzole) can be determined as soon as the corresponding differential absorption coefficients are known.

In the framework of these measurements, the following trace gases are measured between Schlossberg (where the lamp is located) and Eggenberg (measuring container located at the emergency exit of the Plabutsch tunnel in Baiernstrasse):

- SO₂, O₃ and NO₂

HNO₂, HCHO and NO₃ measurements are scientifically examined. In the measurement container itself, O₃, NO and NO₂ are measured with conventional measuring devices for the purpose of comparison. A monthly report with hourly mean values as well as a final report are drawn up.
Present Situation and Future Perspectives

The measurements were started at the end of June 1996. Based on the integral assessment of the air quality and the semi-annual measuring periods (summer/winter), representative data is expected which will enable objective assessment of the air quality development over the next few years (evaluation according to the Ökostadt 2000 environmental program).

Reference to Agenda 21

6, 7, 9

Documents

Technical documents on DOAS (9 sheets)
Institution
Mag. Abt. 23-Amt für Umweltschutz,
Ref. für Luftreinhaltung und Chemie

Project Title
Benzene concentration in the ambient air

Contact
Dipl.Ing.Dr. Werner Prutsch, +43 316 8724310
Hannes Binder, +43 316 8724311

Contents and Aims
These measures aim at determining benzene emissions on different spots in the streets (in the municipal area of Graz) as annual mean value. As the traffic of motor vehicles is the main cause of benzene emissions, a limitation of the benzene content in fuel to 1 percent by volume (currently an addition of up to 3 percents by volume is permitted) is required.

Present Situation and Future Perspectives
The measurements show that the benzene concentration largely depends upon the season (In the winter months, the values are doubled). This is due to the fact that Graz is situated in a basin-shaped valley (® inversion weather situation). In future, the project will be extended to measurements in underground car parks and tunnels.

Reference to Agenda 21
6,9,7,35
**Institution**
Mag. Abt. 23-Amt für Umweltschutz,
Referat für Luftreinhaltung und Chemie

**Project Title**
Program for Recording Perchloroethylene Concentrations

**Contact**
DI.Dr. Werner Prutsch, +43 316 872-4310
Hannes Binder, +43 316 872-4311

**Content and Aims**
Chemical dry cleaners
The program for recording perchloroethylene concentrations in areas (apartments, groceries) located in the neighbourhood of chemical dry cleaners is carried out with diffusion collectors based on activated carbon (ORSA 5).
The passive collectors are exposed for one week each and analysed in the new environmental laboratory.
A dry cleaner which had been closed by decision of the Trade Office due to findings of measurements carried out in 1993, changed to a HCS cleaning system (hydrocarbon solvent) and took up operation in 1994.

**Present Situation and Future Perspectives**
Now, samples for continuous monitoring of various flats in the neighbourhood of dry cleaners are taken. The findings should help to push ahead the change to alternative cleaning methods.

**Reference to Agenda 21**
6, 7, 9
**Institution**
Mag. Abt. 23-Amt für Umweltschutz,
Referat für Luftreinhaltung und Chemie

**Project Title**
Pilot Project on the Use of Bioindicators of Atmospheric Pollution in Urban Areas

**Contact**
DI.Dr. Werner Prutsch, +43 316 872-4310
Hannes Binder, +43 316 872-4311

**Content and Aims**
A standardised exposition of certain indicating plants makes it possible to determine type and quantity of atmospheric pollution at the relevant location.

Tampere (SF), Copenhagen, Charleroi (B), Lilles (F), Nuremberg, Modena and Florence are further cities participating in the EU project of GD XI. AGRER, a company working in the field of environmental protection, and the Gembloux (B) University coordinate the project.

In Graz, the project is carried out by the Seibersdorf Research Centre in cooperation with the Graz University, Dept. of Plant Physiology and the Municipal Authorities of Graz, Municipal Garden Dept. and the Department of Environmental Protection.

Eight to ten locations are chosen for exposing the plants in the urban area. The selection of the locations is based on the following criteria:

- Even distribution between city centre and periphery, valleys and hills
- Location at or near permanent air quality measurement points
- Avoidance of larger punctual emission sources
- Comparability with the 1987/88 Bioindicator Network

**Present Situation and Future Perspectives**
The evaluation of the environmental condition in the city is a major part of the Ökostadt 2000 environmental program.

In addition to the current chemico-physical measurements of airborne pollution, bioindicator measurements with plants are an important contribution to the monitoring and evaluation of atmospheric pollutants.

**Reference to Agenda 21**
6
**Institution**  
Mag. Abt. 23-Amt für Umweltschutz,  
Ref. für Luftreinhaltung und Chemie

**Project Title**  
Registration of Dust Emission

**Contact**  
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**Content and Aims**  
In order to enable a better characterisation of way and amount of dust pollution in Graz, a measuring program for determining dust precipitation by means of Bergerhoff collectors according to VDI 2119 was started in 1994.  
On 13 locations, the mean value of dust precipitation during one-month measuring periods is determined in grams and/or milligrams per square metre and day.

In addition, a TEOM 1400a measuring instrument for measuring local airborne dust was purchased. Measurements of particle mass are based on particles collected on a filter. The particle mass used as a basis for calculating the concentration is generally defined as “mass collected on a filter medium”.

**Present Situation and Future Perspectives**  
The Bergerhoff collectors are continuously put up at 13 measuring points in the city. The airborne dust measuring device, TEOM, is currently located in the area of a steelworks.

**Reference to Agenda 21**  
6

**Documents**  
Dust measurement graphs (2 sheets) as an example
Institution
Amt für Umweltschutz,
Referat f. Lärmbekämpfung und Schallschutz,
Griesgasse 11,
A-8020 Graz

Contact
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Aims and Contents
Due to the grown structure of a City and the motorization that has strongly increased within the last few years and the resulting noise nuisance for the inhabitants living along main thoroughfares, the City of Graz has granted subsidies for the installation of quality windows since 1981. This secondary sound insulating measure is to help to achieve a value necessary for comfortable living. Subsidies will be granted for both the window and its installation, the amount of the subsidy being corrected according to the adequate expenditure. The subsidy that is granted once is a socially graduated capital transfer payment amounting to 25 % or 75 % of the adequate expenditure.

Present Situation and Future Perspectives
On the average, the City of Graz spends about 52,830 ECU for this subsidy (relating to the last few years). An amendment of the guideline that contains a considerable bureaucratic simplification is being processed.

Reference to Agenda 21
6

Documents
Guidelines for Subsidies for Sound Insulating Windows of the City of Graz
Leaflet
Settlement

Siedlungswesen

Agenda 21

7
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Institution
Magistrat Graz
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Rathaus, II Stock, Zimmer 139
8010 Graz

Contact
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                Fax: 872-3341

Project Title
Seniorenresidenz Floßlendstraße 18-24

Contents and Aims
The municipal transferral building project Floßlendstraße 18 - 24 Senior Citizen Residence was built in the fourth district of Graz, Lend. The percentage of older people in this district, as elsewhere in the inner-city, is particularly large.

This senior citizen housing estate which was built with the aid of public subsidies has a total of 51 senior citizen flats (41 single-person households and 10 two-person households), a social centre, a communication centre including a day-time café and has an integrated disabled persons care facility. An underground car park and cellars go to complete the exceptional building standards of this estate. All storeys can be reached via two lifts and are suitably equipped for disabled persons, as are all flats which are between 40 and 60m².

The location of this senior citizen housing estate was selected so as to guarantee infrastructure facilities in this inner-city district.

The promenade along the river Mur as a place for relaxation, shopping facilities for everyday needs, the good supply of doctor’s practices for medical care and the wide range of public and private facilities all contribute to important social and societal integration for the 60 occupiers so important for their general well-being.

The in-house service of psycho-therapeutic and physio-therapeutic care is managed by a private association with the support of the Department of Social Affairs of the city of Graz.

Furthermore, the occupiers of this senior citizen housing estate can make use of all supporting fa-
facilities offered by the city of Graz including a meals-on-wheels service, a mobile home care service etc.

This senior citizen project was financed with housing and home promotion funds of Styria province and budget funds of the city of Graz.

Present Situation and Future Perspectives
The success of this project for the future is guaranteed by the fact that integrating senior citizens is not only an essential social and societal factor, but is equally important in terms of urban development.

Reference to Agenda 21
7

Documents
Description of building . colour brochure,
Gereontological Social Centre,
Institution
Magistrat Graz,
Stadtbaudirektion,
Bau- und Wohnberatung für Behinderte,
Tummelplatz 9/III, A- 8010 Graz

Contact
Dr. Gerlinde Hohenster 872/3508

Project Title
Integration of Handicapped Persons by Avoiding and Reducing Structural Barriers

Contents and Aims
Planning the human environment without barriers is a major requirement for independent living and social integration of disabled people.

For years now, the city of Graz has been endeavouring to improve the structural situation for disabled people.

1984: As one of the first cities in Austria, Graz installs a local level "building and housing counselling service for the disabled".

1991: In order to better promote disabled interests, the city planning department sets up a project group "building without barriers".

1993: The local council approves guidelines elaborated by the project group for no-barrier planning of public spaces.

1995: The local council approves observation of ÖNORM B 1600 "Building without barriers" for public buildings (text in the enclosure).
Present Situation and Future Perspectives

On the basis of this decision it is subsequently possible to adapt a large number of public buildings without barriers in the course of a general renovation scheme for state schools and official buildings.

The numerous measures for people with impaired sight, some exemplary for Austria, particularly planning of passenger tunnels at Graz main railway station to meet the requirements of blind and impaired vision and also measures in redesigning the Jakominiplatz, the central traffic junction in the inner-city area.

Planning of the passenger tunnels suitable for handicapped people won 1st prize at the Brunel Awards 1995.

By publishing brochures on this subject the aim is to make a contribution to better understanding of the problems of disabled people and at the same time to provide planning aids for building without barriers.

Reference to Agenda 21

6,7

Documents

STEK Graz: "Bauen ohne Barrieren"
STEK Graz: "Straßen für Alle"
Brochüre: "Barrierefreies Bauen für Alle"
Contents and Aims
Urban Graz - Space for People describes an interlinked overall plan of measures promoting an inner-city area of Graz, GRIES, rich in tradition and yet jeopardised in its structure. The basic idea of taking advantage of the interplay of a wide range of different clusters of measures to achieve a synergetic effect for improving living conditions will determine the selection of the planned projects.

These are grouped in seven different clusters of measures and are oriented along the lines of three priority axes selected for the programme:
A District development and renovation
B Job creation and tightening the social security net
C Public participation, project management, exchange of experience and technical assistance

The overall frame of costs for the measures proposed in URBAN GRAZ - “Space for People” totals 256,5 Mio ATS (19,73 M.ECU) The portion to be paid by the municipal authorities of Graz which has already been approved amounts to 123,5 Mio ATS (9,5 M.ECU). This sum is to be supplemented by investor payments for individual projects amounting to 133,0 Mio ATS (10,23 M.ECU) which cannot, however, be taken into the overall project costs. We are expecting a grant of 47 Mio ATS (3,61 M.ECU) from European Commission funds (EFRD-Urban and ESF reserve). This means an approximately 60:40 ratio of apportionment between the city of Graz and the EU, not counting private investors. No funds from the federal government and Styria province have been earmarked for the implementation of this programme.
"Space for People"
Enhancing the quality of life in all parts of the city, particularly reducing supply deficiencies in the social infrastructure and upgrading areas of the city and district centres with the aid of urban design is a permanent task for the local authorities in Graz.

But in order to preserve these inner-city qualities a holistic programme is planned to place special emphasis on disadvantaged areas of the Gries district.

With the aid of EU co-financing, we have been able to ensure that the provision of staff and funds to other districts of the city is not impaired.
Present Situation and Future Perspectives

a) Significance for the urban development concept
The basic objectives of urban development in the city of Graz were set out by Graz City Council in the Urban Development Concept STEK 1990 approved in November 1989. These objectives still hold good today. Various discussions of models, in connection with statutory, periodic continuation and adaptation of the Urban Development Concept to changing conditions - such as Austria’s accession to the EU - demand that we create a new Urban Development Concept - "STEK - 2000".

This STEK 2000 concept will be the general coordination instrument of the planning administrative authorities, specifically geared to the regional planning sector. Furthermore, it will be a paper setting out the position of the local authorities with regard to regional and federal issues of urban development, harmonising the individual programmes, and finally co-ordinating the EU development programmes.

b) Model
What is behind the "URBAN Graz - Space for People” project is the higher objective of improving the residential and economic quality in the most plighted area of the traditional inner-city districts of Graz, Lend, Gries and Jakomini. In connection with this, the situation vis-à-vis previously privileged districts is to be gradually balanced out.

As a district programme, "URBAN Graz - Space for People" is an attempt to enhance the basic liv-
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ing conditions by linking up various areas. This includes promoting equal opportunities from an economical, social and cultural point of view for all the inhabitants of the URBAN area, regardless of their origin. This requires a setting that is principally favours private property and thus public identification with the local residential and working sectors.

In order to improve the economic structure, what is required is a tighter link-up with neighbouring economic focuses - the central core area (City) in the N and NE and a shopping centre in the SW (Interspar). A new tram line (SW line) is aimed to create this link as a mainstay of transport access to the area.

c) Selection and interplay of the individual projects

From the point of view of urban development policy, the URBAN programme primarily contains projects and current programmes with wide political consent aimed at achieving the set objectives of urban development. In order to avoid initial difficulties, certain projects are based upon projects already in operation and upon existing structures, supplementing and elaborating these projects in a meaningful manner, but always along the lines of URBAN.

In order to ensure that synergetic effects can be created between the clusters of measures, great attention was paid to their agreement with the general objective of improving living conditions, and to there being no conflicts between the individual measures (e.g. procurement of housing and safeguarding green areas).
d) **Priority axes**

Three special focuses for development have been selected from the possible areas of action on the basis of the NRC 180/6 memorandum, section III:

A **District development and renovation**

This includes problem-oriented measures aimed at improving the quality of public spaces and the traffic network, measures for improving the residential situation and the environment, structural measures for densifying the social infrastructure and a special form of local business promotion.

B **Job creation and tightening the social security net**

The main emphasis here is placed on a reduction of unemployment with effect on the specific district, also for fringe groups particularly by initiating socio-economic projects and a form of social work geared to regionally specific problems.

C **Public participation, project management, exchange of experience and technical assistance**

The main focus is on measures aimed at achieving an effective project which is also seen positively by the public, promoting public identification with the focuses of the programme and the underlying objectives of the EU.
e) Implementation concept and expected effects

The local authorities of Graz with their specialised sections, co-ordinated by a managing group and with the participation of a project management to be appointed, will be mainly responsible for implementing the programme in the period 1996 - 2000. In the medium term, it is planned to find an independent project sponsor in the respective district in the form of a district project by elaborating and networking existing local initiatives in substantial areas.

The catalogue of individual projects is not to be regarded as having been completed by the Urban Graz - Space for People programme, but can rather be supplemented by specific additional measures in the course of implementation.

The Urban Graz - Space for People programme is thus to become a driving force of inner urban development in the URBAN area itself, but is also to act as an example for further inner-city problem areas. The holistic approach to solving the problem is to help achieve a tangible positive overall effect clearly demonstrating the advantages of such an approach.

f) Effect on the labour market and investment:

Beyond its narrower scope, in the medium and longer term the programme refers to a volume of public investment of around 1.5 billion ATS, to be supplemented by private investment.

During the duration of the programme it is planned to create approx. 350, subsequently approx. 250 permanent jobs.

Reference to Agenda 21

7,15

Documents

Brochure “Urban Graz”
Settlement

Institution
Magistrat Graz,
Amt für Stadtentwicklung und Stadterhaltung,
Rathaus 3. Stock,
A- 8010 Graz

Contact
DI Hansjörg Luser 872/2022

Project Title
Development Focus Area Graz South-East

Contents and Aims
With a hearing on the development focus area Graz south-east held in November 1993, the city of Graz commenced a process of development for a large connected and hitherto inhomogeneously utilised area. On the basis of this hearing an idea competition was started in July 1994 whose aim it was not only to redefine and conceive a district area of the city - its role, its inherent characteristics, its functions - but also to plan and design the area along the lines of this concept in collaboration with local inhabitants, businessmen and investors.

35,000 people currently live in this development area situated between the river Mur and the Münzgrabenstraße and between the Grazbachgasse and the Liebenau stadium.

The vision is to provide a district totalling 250 hectares (the wider planning area, the more immediate area totals 90 hectares) with opportunities to develop and become an extension of the inner city of Graz towards the south, a district with short distances and green islands. The competition was aimed at putting this vision of the planners into a more visible and communicable form, foreseeing the targeted situation.

The result of the competition forms the basis for elaboration of a district development concept. In a close dialogue between the city authorities, interest groups and the citizens themselves, the aim is to create a feasible concept that is to push this vision one step closer to reality. It will thus mark out a general framework enabling investors to find room for personal development within the framework of public wishes and general advantage.

In addition, with regard to those areas available...
for larger investor projects, there will be intensive processes of further development with the city of Graz.

The draft design is characterised by the dialogue between two "empty spaces". One the one hand the river from whence the city of Graz developed and, on the other, a new "empty zone" in the form of a park called the valley of relaxation. Both empty spaces are landscape protection areas. Connecting lines are to be created between the river and the valley of relaxation, lines structuring the south-eastern section of Graz.

The strategy of the planning process was to set up numerous links. These determine local fluctuations. By forming subsystems in individual spaces, processes of development can be constantly adopted into the overall model without changing the basic idea.

Present Situation and Future Perspectives
A substantial contribution to the overall concept is currently the new construction of the Liebenau stadium as a multi-functional centre for sports, leisure, offices, housing and shopping, combined with an underground car park for 600 cars; this centre will delimit the immediate planning area to the south. Further implementations in important sub-areas are to follow in the next few years.

Reference to Agenda 21
Documents
Brochure “Entwicklungskonzept der Stadt Graz”
Institution
Magistrat Graz
Amt für Stadtentwicklung und Stadterhaltung
Stadtbaudirektion / Verkehrsplanung
Rathaus, 8010 Graz

Contact
DI Hansjörg Luser 0316/872-2022
DI Manfred Hönig 0316/872-3505

Project Title
GIVE- Grazer Integrierte Verkehrs Entwicklung
(Graz Integrated Traffic Development)

Contents and Aims
Urbanity, urban quality, means offering inhabitants an attractive living, economic, residential, working and leisure environment; it means reaching destinations as fast and as comfortably as possible.

The task of the urban traffic policy is thus to facilitate human mobility with a minimum of annoyance and use of resources.

All means of transport should be used according to their specific strengths and weaknesses with the aim of living, economising and working in Graz with maximum quality.

Present Situation and Future Perspectives
The conception and system of traffic policy in Graz over the past few years can be compared to a pyramid: Right at the top is Gentle Mobility. Created as a model at the very beginning, its aims are promoting alternatives to the car in order to achieve a co-operation of ALL means of transport so as to improve the quality of air and save on space and energy.

The second step was the elaboration and approval of the traffic policy guideline 2000. It comprises five principles and serves as a strategy for putting the vision into practice. It was twice clearly affirmed by the population at the 1995 referendum.

The third step is this general programme of measures, the final report of the project group GIVE (Grazer Integriete Verkehrsentwicklung), ap-
proved by the local council on 30 November 1995. It includes central projects allowing us to come nearer to achieving the objectives of Gentle Mobility and comprises action guidelines for routine work. It summarises the division of tasks for Graz is neither financially nor legally in a position to take care of all aspects of traffic to and from Graz alone. Much of this work can only be tackled with the aid of partners.

It increases our awareness for seeing traffic in a regional and supra-regional dimension, beyond city and provincial borders. It obliges us to plan and document progress in the form of annual reports. And thus it provides a new quality of implementation.

It was created in the course of extensive communication between representatives of all groups affected by traffic. It thus enjoys wide support. Finally, it was also possible to dispel any distrust and misunderstandings and to establish partnerships aimed at achieving common goals. The advisory traffic committee is continuing the task of extensive communication in important issues. And finally it includes a list of what the individual measures of construction and operation cost. How the most important of these are to be funded will have to be elaborated in a financing concept to be drawn up.

Reference to Agenda 21
7, 9

Documents
Brochure “Tempo 30/50”
1 issue of BIG (newspaper)
Brochure “GIVE”
Institution
Magistrat Graz,
Amt für Stadtentwicklung und Stadterhaltung
Rathaus, 8010 Graz

Contact
DI Hansjörg Luser 0316/872-2022
Dr. Burghard Kaltenbeck 0316/872-4800

Contents and Aims
The industrial belt to the west of the Südbahn resulting from the historical development of the city of Graz is in a state of radical change now, at the close of the 20th century. The plants located here in the course of the 19th century were situated outside the city due to their dependency upon the railway and also due to their size.

Between the old district Eggenberg, with its dominating château, and the city centre an extremely heterogeneous area of the city has evolved between the Alte Poststraße and the railway line. This "inner-city periphery" is characterised by large-area factory plants, large interconnected areas of open land, the railway (Südbahn and Graz-Köflacher-Eisenbahn) and residential buildings dating back to the sixties and seventies and, finally, allotment complexes.

Due to industrial change over the past years (dislocation of production to cheap wage countries, capacity problems of some companies, change-over to products requiring less space for production, concentration of companies at one single location, etc.), there is a large number of pieces of land available. Due to the selected urban location of this area, future planning and development is of great interest for the city of Graz. The increasing pressure of competition between the cities of Austria and all Europe demand that forward-looking guidelines of urban development be created with regard to this issue in order to create the best possible conditions for potential investors wishing to locate companies here. In contrast to other Austrian cities, this development area, so centrally situated, offers Graz the chance of vastly enhancing its image as a location of technology and research.
Present Situation and Future Perspectives
In the course of establishing technical college courses, (4 new courses to be installed in addition to the existing 4 in autumn 1997), a permanent location for the technical college and follow-up facilities must be found in the course of this investigation. Together with the student hostels, other research and training facilities (Joanneum Research, Austrian Academy of Sciences etc.) and private firms in the high-tech and research sectors, it is possible to transform this traditional industrial belt into a new technology belt.

The creation of an "urban symbiosis" comprising technology and research facilities, social infrastructure and housing and leisure facilities is the aim of such a development.
The effects of this transformation on the entire city area between the railway station and Eggenberg are to be examined from all angles in this study.

Reference to Agenda 21
7, 36
Institution
Magistrat Graz
Amt für Wohnbau und Wohnbauförderung
Wurmbraugasse 4
8010 Grat

Contact
Dr. Ingrid Bardeu

Project Title
Living in Graz

Contents and Aims
The City Senate of Graz approved elaboration of a "Housing Programme for the City of Graz" on 12.11.1993. This programme is to be the political guideline for the next 10 years with regard to all issues of municipal and non-municipal housing in Graz.

The Advisory Project Committee was responsible for political opinion-making necessary for implementing concrete measures and for fine-tuning with the other issues of urban planning and development. In future all political forces are to act in concert in order to ensure an adequate supply of suitable housing.

The "Housing Programme Graz" is based upon the principles of the urban development concept 1990 which states the following:

• Increasing migration is to be counteracted.
• Guaranteeing housing for socially weak groups.
• Renewal and renovation of historical districts and guidelines for construction of new flats in such a form that existing infrastructures are utilised and motorised traffic is minimised.
• Space-saving modes of construction to be preferred.

These general statements on housing policy must be further differentiated and detailed objectives and measures formulated with reference to deadlines and funding.
**Presents Situation and Future Perspectives**

**ANALYSIS OF CURRENT SITUATION**

1. Development of available housing since 1971 according to districts, current housing status according to number and quality
2. Current lack of housing, by number of flat-seekers (quantitative lack) and also by lack of standard in available housing (qualitative lack).
3. Current utilisation of available housing, empty housing.
4. Derivation of current requirements in terms of catching up, renovation, and replacement on the basis of the current status analysis. Special chapters to deal with problems of basement flats, student housing, disabled and senior citizen housing.

**ESTIMATION OF HOUSING REQUIREMENTS UP TO 2006**

5. Calculation of development requirements of housing for the period 1996 to 2006 and also expected requirements of renovation and replacement up to 2006.

**SCENARIOS OF SATISFACTION OF NEEDS**

6. Analysis of existing building land reserves for housing.
7. Showing possibilities of satisfying housing requirements in Graz up to 2006.
8. Comparative analyses of various scenarios.

**FORMULATION OF A "HOUSING PROGRAMME GRAZ"**

9. Where and to what extent must development and renovation focuses be determined.
10. Cluster of measures for implementing the development ideas by the year 2006.

**Reference to Agenda 21**

- Handout,
- Brochure “Wohnen in Graz”
<table>
<thead>
<tr>
<th><strong>Institution</strong></th>
<th><strong>Project Title</strong></th>
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<tbody>
<tr>
<td>Amt für Umweltschutz, Referat f. Lärmbekämpfung und Schallschutz, Griesgasse 11, A-8020 Graz</td>
<td>CADASTRAL MAP RELATING TO TRAFFIC NOISE for the main street network of Graz</td>
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<tr>
<th><strong>Contact</strong></th>
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<tr>
<td>Dipl. Ing. Johann Ofner +43 316 872 4303</td>
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<tr>
<th><strong>Aims and Contents</strong></th>
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<td>In areas of concentration, traffic noise is, as is generally known, responsible for 70 - 80 % of the noise nuisance for the inhabitants. The Noise Cadastral Map „Traffic Noise“, which has been created in cooperation with the Technical University of Graz, has been adopted into the „Digital City Map“ in cooperation with the Department 10/6 of the Municipal Authorities. On the whole, the Cadastral Map relating to Traffic Noise can be seen as essential element for the Environmental program „Ökostadt 2000“. In the sense of sustainability, a reduction of all traffic routes with a nuisance by traffic noise of more than 65 dB by 10 % is intended. Furthermore, the Cadastral Map relating to Traffic Noise is at the basis of the Noise Sanitation Plan and of evaluations as to whether sound insulating windows are worth granting subsidies.</td>
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<th><strong>Present Situation and Future Perspectives</strong></th>
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<td>The Cadastral Map relating to Traffic Noise was created in 1993 on the basis of reference data from 1994. It was, in particular, the priority streets that were recorded and incorporated into a model for selecting traffic routes. The data are intended to be updated every 5 years and, if necessary, subdivided into a more fine-meshed network.</td>
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<th><strong>Documents</strong></th>
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<tr>
<td>CADASTRAL MAP RELATING TO TRAFFIC NOISE - Leaflet</td>
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Institution
Amt für Umweltschutz,
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Project Title
NOISE SANITATION PLAN

Aims and Contents
This plan is being elaborated. By means of guidelines to be voted, in which the Municipal Government declares itself for a NOISE REDUCTION POLICY, a program allowing the systematic reduction of noise nuisance is to be established. An essential basis for this is the Cadastral Map relating to Traffic Noise for the main street network of Graz.

By means of pilot studies on a main thoroughfare („Hauptverkehrsstraße“) with a closed building-up and a commuter-belt road („Einzugsstraße“) with an open or dispersed building-up as well as a passage through the city center („Ortskerndurchfahrung“), different measures for noise reduction are to be elaborated, and experimental values are to be gained for the implementation of various measures and their cost-benefit ratio.

Reference to Agenda 21
6, 7

Present Situation and Future Perspectives
Based upon the Cadastral Map relating to Traffic Noise as well as the other tangent projects and concepts within the City, the reduction of streets with a noise nuisance over 65 dB by 10% is one of the targets aimed at. The speed limit covering the entire area (Speed 30) on streets that are no priority streets is to be continued.

Documents
See Leaflet GIVE, No. 15
Institution
Mag. Abt. 23-Amt für Umweltschutz, Referat für Luftreinhaltung und Chemie

Project Title
Environmental Information System - Graz Emission Cadastre

Contact
DI.Dr. Werner Prutsch, +43 316 872-4310
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Content and Aims
Based on the 1989 Graz emission cadastre, the emission cadastre is being updated for the year 1996 in accordance with the requirements of ÖNORM M 9470 (draft); system specification for EDP supported creation of an environmental information system is being carried out. The scope of evaluation must generally correspond to exactness stage II. Individual areas with corresponding marking in the specifications have to come up to exactness stage III.

The following pollutants have to be determined:
• Sulphur dioxide (SO2)
• Nitrogen oxides (as NO2)
• Carbon monoxide (CO)
• Carbon dioxide (CO2)
• Volatile, non-halogenated org. hydrocarbons without methane

The CO2, CH4, C6H6 parameters and the heavy metals listed above as well as the planned determination of energy used (structured according to final energy carriers) exceed the scope of the 1989 emission cadastre by far.

The emissions are divided into three groups of polluters:
• Traffic
• Industry and trade
• Households and others
Present Situation and Future Perspectives
An important step in the registration of environmental data of the city of Graz is made by the continuation of the emission cadastre, in so far as the data is presented in a form that makes evaluation and further processing in combination with a graphical information system possible. In connection with the digital city map of the Municipal Surveyor’s Office, emission data can be processed based on spatial criteria and linked to other environmental data (noise, waste, waste water, etc.) to create a meaningful environmental information system.
Thus, new and better opportunities for the evaluation of the environmental situation of Graz are offered. EDP processing is planned to be organised in the framework of a pilot project. The project will specify the system requirements for establishing the geography-supported environmental information system with the areas air pollutants, noise, company waste and energy on the basis of the digital city map, of existing environmental files and an emission cadastre EDP program.
The planned EDP registration enables an independent updating of the emission cadastre and expertise in some areas.

Reference to Agenda 21
6, 7, 9
Institution
Mag. Abt. 23-Amt für Umweltschutz, Referat für Luftreinhaltung und Chemie

Contact
DI.Dr. Werner Prutsch, +43 316 872-4310
Hannes Binder, +43 316 872-4311

Content and Aims
The project is aimed at evaluating and distributing zero-emission and low-emission vehicles.
In 1995, the city of Graz was the only Austrian city to be selected in the framework of a JOULE II EU project (JOU2-CT92-0195) for further evaluation of electric vehicles.

The Ökodrive project includes:

• Market observation, mainly with regard to electric and gas-driven vehicles and cars using rape-methylester as fuel.
• Testing of vehicle concepts by the Environmental Office which uses an electric car (VW Polo) and an ECO-Golf with rape-methylester fuel and overrun fuel cut-off.
• Partial financing of the Electrotaxi Graz field test, carried out by the 878 taxi company with scientific support of the Forschungsgesellschaft Mobilität. An electro-taxi is being tested in city traffic.

Present Situation and Future Perspectives
Further progress of the project depends mainly on the further market development of the corresponding vehicle types. Incentives for using low-emission or zero-emission vehicles; increased used in the vehicle fleet of the municipal authorities.

Reference to Agenda 21
4, 7, 9, 36

Documents
Evaluation of the Introduction of Electric Vehicles in the City of Graz, Austria (EU report)
Institution
Grazer Stadtwerke AG -
Verkehrsbetriebe (GVB)
Steyrergasse 114, 8010 Graz

Contact
DI Solymos
Tel.: 887 DW 749, Fax: 887 788

Contents and Aims

With regard to the registration forms, the Grazer Verkehrsbetriebe propose item 6 "Implementation".

The Grazer Verkehrsbetriebe as part of the Grazer Stadtwerke AG operate 7 tram lines and 30 bus lines in Graz. The Grazer Verkehrsbetriebe employ around 700 members of staff, of which 400 work as drivers. Another 200 employees work in the workshops. The fleet is composed of 66 trams and 126 buses, with more than one third of the buses being low-platform buses. The tram network totals almost 50 km. The bus network almost 177 km. Last year (1995) the Grazer Verkehrsbetriebe transported almost 100 million passengers, an increase of around 33 % vis-à-vis 1989.
Present Situation and Future Perspectives

From the point of view of public transport, after an unfavourable development in the period from the end of World War II to the start of the seventies (substitution of trams by buses and reduction of tram lines), by the end of the eighties the situation had been stabilised. Since then we can observe a constant upward trend in public transport use. In co-operation with the city of Graz and on the basis of various local council resolutions, it is planned to expand the public transport network within the "Gentle Mobility" scheme. The main points of the continuing upswing since then were

2. A fare reform in 1988 that brought vast reductions for monthly season tickets.
3. Introduction of a timetable of regular departures in 1990 with tighter intervals and longer running hours (increase of annual mileage by around 11%).
4. Extension of tram line 1 by around 500 m to the new emergency hospital in 1990.
5. Further improvement of the regular departure timetable by introducing new lines (mileage increase approx. 5%) and a call-a-cab system in 1992.
7. Start of conversion of the Jakominiplatz with a contract volume of around 10 million ECU in 1995. This conversion is to be completed by autumn 1996 and comprises completely new construction and extension of the rails with new turns and rail links.

The public transport system in Graz is to be further expanded on the basis of numerous projects and planning ideas in the next few years. A pro-
gramme in operation for several years now aimed at prioritising public transport, particularly trams, is now to be carried on under the overall control of the Grazer Verkehrsbetriebe (hitherto the local authorities of Graz). This will include above all zero waiting time at traffic lights and separate lanes to normal traffic.

Construction work on extending the number 6 line by almost 2 km to reach a large housing area to the south-east of the city is to be commenced in 1997. This work is to be completed by autumn 1998.

Concrete planning activities have been begun on a new tram line for the south-west of Graz, also including an inner-city side-line. Construction is to be begun before the year 2000.

Currently, two calls for tenders are being carried out for the tram fleet which will include purchase of new low-platform trams and also retrofitting existing vehicles with low-platform mid-sections.

In the foreseeable future, it is also planned to purchase a computer-aided operating system and to construct a new main tram workshop.

In total, the Grazer Verkehrsbetriebe have invested a total of almost 75 mill. ECU over the course of the past 10 years.
Institution
Feuerwehr der Stadt Graz,
Keplerstraße 23, A-8020 Graz

Contact
BD Dr. Otto Meisenberger
Tel.: 9092/100

Project Title
Long-term safety and environmental concept for
the conglomeration of Graz particularly with
regard to emergency activities in the event of
environmental impairments and disasters.

Contents and Aims
Regards PR work, a great deal has been achieved
in collaboration with the district fire brigade asso-
ciation over the past 5 years. A large range of
seminars is offered: A wide public is informed
about handling fire extinguishers, working and
dealing with chlorine, ammonium or hazardous
substances in general.

In order to better get to grips with the specific el-
ements of danger in Graz, over the past few years
we have increased the number of corporate fire
brigades from 5 to 16. Together with PR work and
an efficient professional fire brigade this is an ex-
tremely high international standard of safety.
Present Situation and Future Perspectives

The city of Graz has a professional fire brigade employing 238 persons to ensure the safety of the approx. 350,000 inhabitants of this conglomer-ation. The fast action of this institution not only guarantees a high level of safety for the public but equally so for the environment. Examples include emergency action in the event of soil, water and air pollution in close collaboration with other departments (department of environmental protection, oil alarm service, municipal depot, department of road and bridge construction etc.). Toxic gas clouds occurring in the course of hazardous chemical fires or hazardous transport accidents are an increasing problem for the fire brigade. In order to be equipped with the latest technology for such events, an ECU 1.9 million EDP-supported fire-fighting HQ, both guaranteeing communications in emergency situations and also quickly providing important data on chemicals etc.

The Fire Brigade of the City of Graz has been a hazardous waste centre in Styria province for 5 years now with special task vehicles and equipment for this specific purpose totalling ECU 1.1 million.

Furthermore, fire waste is disposed of with great care. With dangerous fires, regular rust specimens are taken in order to ascertain their toxicity so as to rule out any hazard to humans or the environment.

Reference to Agenda 21

7
Decisionmaking Processes

Agenda 21

Entscheidungsprozesse
Summary

Economic Impacts of the Municipal Energy Concept KEK („Kommunales Energiekonzept“) Graz ........ 96

Energy and Emission Balance Sheet for Graz ........................................................... 97

Foundation of a Municipal Energy Agency .... 98

The Municipal Energy Concept as participative project oriented towards implementation ................................................ 99
In cooperation with the Technical University of Vienna, Department for Infrastructure, Politics and Finance, the economic impact of the 3 most important KEK Elements have been determined. This work aimed at verifying the thesis that imported energy carriers can be replaced by know-how and indigenous labor at the same capital requirements.

Thus they are about double the program cost estimated for the initiation of the investments.

What should be stressed, in particular, is the employment effect that has been estimated at about 14,000 manyears. If this number is converted to the 15 years’ period of the Municipal Energy Concept, this means appr. 1000 permanent jobs.

This project shows that the implementation of the Municipal Energy Concept does not only have positive effects on the local situation of air and also is a contribution to the stabilization of the global climate but that an essential aspect of this concept also consists in reviving the regional economy, which means net additional receipts for the Regional Authorities in spite of high program cost.

Reference to Agenda 21
8, 9, 33, 35, 36, 40,

Documents
KEK Report No. 17 (Project No. 60, File 9)
In order to determine the actual state and the initial values for the obligation for the Climate Alliance, an Energy and Emission Balance Sheet for the City of Graz was prepared. Based upon the values of the Austrian count of houses and flats, the job statistics and the traffic data, the needs for usable and supplied energy in Graz were determined by subdividing into the energy carriers and the sectors household, public sector, small consumers, industry and traffic. Based upon this, the CO₂, SO₂, NOₓ, HC, CO and the dust emissions were calculated for Graz.

Based upon the Energy and Emission Balance Sheet of 1993, it was also a reference development for the years 2000 and 2010 that was determined. This reference development is based upon a development of living / usable area assumed in the Issue Related Program Living according to the forecast increase in population as well as the development of trends in the single branches of industry. The energy efficiency was assumed to remain constant.

These Energy and Emission Balance Sheets and Reference Developments resp. are to be at the basis of the review of the extent to which the aims have been achieved according to the voted targets.

Reference to Agenda 21

8, 9, 35, 36, 40

Documents

KEK Report No. 6 (Project No. 60, File 9)
KEK Report No. 9 (Project No. 60, File 9)
Institution
Magistrat Graz, Amt für Umweltschutz, Referat für Energie und Klima, Griesgasse 11, A-8020 Graz.

Contact
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Contents and Aims
In order to implement the aims of the Municipal Energy Concept, a lean organization in the form of Private Limited Company is to be founded. This Municipal Energy Agency particularly is to overcome the two most important barriers on the way to a more efficient use of energy and the use of renewable energy carriers, the lack of information and the investor-user problem, by a financing by third means and the target group specific supply with information.

This agency is to act as „Energy Performance Contractor“ itself. This means that contracts for the optimization of energy consumption are concluded and that these contracts are to pay for themselves via the energy saved to the advantage of all.

Present Situation and Future Perspectives
The agency is to be cofinanced by an EU Project already approved from Brussels for the first 3 years. For the first 5 years, the disposals have to be borne by the associates. Then the agency, whose main purpose is not to be profit, is to bear the disposals itself. The main purpose of the Municipal Energy Agency is to achieve the targets that have been voted in the Municipal Energy Concept and that can be reviewed quantitatively.

Reference to Agenda 21
6, 8, 9, 25, 27, 28, 30, 31, 32, 33, 36, 40.

Documents
KEK Report No. 21 (Project No. 60, File 9)
Institution
Magistrat Graz, Amt für Umweltschutz,
Referat für Energie und Klima,
Griesgasse 11, A-8020 Graz.

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Project Title
The Municipal Energy Concept as participative project oriented towards implementation

Contents and Aims
If concepts are not only to be printed on paper but also to be implemented, it is necessary to incorporate all important protagonists as soon as possible. In the Municipal Energy Concept Graz (KEK - „Kommunales Energiekonzept“), 100 organizations and institutions were invited to participate from the beginning. 76 of these appointed altogether 180 representatives for the team meetings. In these team meetings, all members had the opportunity to participate in organizing the development of the Municipal Energy Concept and to present their own points of view. The process for developing the Municipal Energy Concept was oriented towards 3 basic concepts:

1. Clear, politically approved targets
2. Broad participation of all energy political protagonists
3. Implementation of concrete projects during the presentation of the concept

This process lasted from September 1994 to April 1996. During this period, the members of the 4 KEK Teams (originally 5 teams) were invited appr. every 2 to 3 months to meetings, in which the progress and the processing of the contents were presented to them and they were given the opportunity to comment. Furthermore, the meetings were used to continue working on the concrete projects.
Present Situation and Future Perspectives

Due to the broad participation in the preparation of the Municipal Energy Concept, this ambitious directive project could be unanimously voted by the Municipal Council of Graz on April 11th, 1996. On June 13th, the final results were presented to all participants again. In future, the created structures are to be utilized to discuss energy political topics and present the progress in the implementation of the Municipal Energy Concept to the participating institutions at least once a year.

Reference to Agenda 21
4, 8, 9, 10, 29, 30, 31, 33, 34, 35, 36, 40,

Documents
KEK Report No 20  (Project No. 60, File 9)
KEK Reports No 1, No 2
Summary

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pal „Wirtschaftshof Graz“ ................................. 126

Supply with long-distance energy and solar installation in the municipal „Wirtschaftshof Graz“ ................................. 127

Electric car ................................................. 129

Investigation into the gas developing on the Landfill Köglerweg ................................. 131
Institution
Mag. Abt. 23-Amt für Umweltschutz,
Referat für Energie und Klima,
Griesgasse 11, A-8020 Graz.

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Project Title
EU Project „Action-Orientation in urban energy management through deformation of energy teams in the cities of Helsinki, Graz, Schiedam and Geel“

Contents and Aims
By means of this project, a Municipal Energy Agency is to be founded in the Styrian Capital of Graz. The Energy Agency is to combine know-how, capital, use, owners and the relevant companies to guarantee the targets of the Municipal Energy Concept Graz KEK („Kommunales Energy Concept“) can be achieved. The main priorities of this agency are to be the Sectors „Thermoprofit“, i.e. financing of the sanitation of the existing buildings by third means, and energy consulting of the population of Graz and the local economy. For the implementation, 4 energy teams have been founded:
  a) Thermoprofit
  b) Solar initiative
  c) Efficient office equipment and efficient electric appliances
  d) Ökoprofit-Energy

Present Situation and Future Perspectives
The 4 Energy Teams have already been founded, and the Municipal Council has entrusted the Financial Department and the Office for Environmental Protection with founding the Municipal Energy Agency. The activities of the Energy Agency are to help to initiate additional investments of 1.13 billion ECU a more efficient use of energy and the use of renewable energy carriers by the year 2010. Due to these activities, 1000 permanent jobs will be created.

In summer 1996, the business concept will be elaborated. By the end of the year, the participation discussions are to be completed, and the Energy Agency is to start its professional work in the 1st Quarter of 1997.

Reference to Agenda 21
2, 6, 9, 25, 27, 28, 30, 31, 32, 33, 36, 40.

Documents
EU Proposal
EU Contract
Proceedings of the „Start-Up-Meeting“
First Intermediate Report
Institution
Magistrat Graz, Amt für Umweltschutz, Referat für Energie und Klima, Griesgasse 11, A-8020 Graz.

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Contents and Aims
The project aims at minimizing energy consumption for the cooling requirements in summer. In Austria the power consumption for the air conditioning of rooms has considerably increased within the last few years. However, the Austrian climate does allow to almost completely do without air conditioning of rooms if the corresponding architecture and house technology are available.

Present Situation and Future Perspectives
An air conditioning equipment for a big Congress Center is to serve as example for the examination and implementation of the possibilities to reduce energy consumption by exploiting the potentials for the reduction of cooling load and by a house technology that is as efficient as possible. This example also is to help to develop a service and quality oriented tariff model for planners. Due to the use of this new tariff model for planners, in particular, the utilization of the existing efficiency potentials for future work in architecture and house technology is to be intensified.

Reference to Agenda 21
2, 4, 6, 7, 9, 19, 30, 34,
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Contents and Aims
Based upon the targets defined by the City of Graz,
the determination of the actual state and the tech-
nical analyses of the measures as well as the par-
ticipative process in the elaboration of the Municipal Energy Concept KEK („Kommunales Energienkonzept“) Graz, the principles for the future of
the energy in Graz were formulated and voted by
the Municipal Council of Graz.
The altogether 19 guidelines are subdivided into
the parts:
a) Principles and aims
b) Priorities
c) Central projects
d) Strategies for implementation
The essential components are the quantitative tar-
ggets to be achieved by the year 2010:
Reduction of the CO₂ Emissions -50 per cent.
Reduction of the classical pollutants -60 per cent.

Reference to Agenda 21
8, 9, 35, .36, 40

Project Title
Guidelines of the Energy Policy in Graz

Reduction of the power consumption (symbolic
getting out of nuclear power -18 per cent
Shares of renewable energy carriers +40 Prozent.)

Present Situation and Future Perspectives
Together with the Municipal Energy Concept, the
principles were unanimously voted in the Municipal Council of Graz on April 11th, 1996.
These principles are to lead to a sustainable de-
velopment in energy for Graz in the next 15 years.

Documents
KEK Reports No: 4, 5, 6, 9, 10, 11, 12, 13, 14, 15,
16, 17, 18, 19, 20, 21
In one of the first meetings for the elaboration of the Municipal Energy Concept Graz, the idea to initiate a Do-It-Yourself Group for having solar installations built by opinion makers and trendsetters was born. Among others, two Councillors of the City of Graz, one Municipal Councillor, the Head of the Office for Environmental Protection and the Manager of the Austrian Energy Recycling Agency (EVA, „Energieverwertungsagentur) as well as many other prominent persons took part in this group. This project aims at encouraging other people in Graz to build solar installations by the example given by the prominent persons.

By late June 1996, appr. 10 prominent persons have completed their installations and now get their hot water in the summer season directly from the sun.

Reference to Agenda 21
4, 7, 9, 34, 36, 40

Documents
Newspaper articles
In the supply with space heating, there are the biggest and often most economical potentials for increasing the energy efficiency and reducing CO₂ that can be mobilized. The Initiative Thermoprofit taken by the City of Graz is a program for the energy related sanitation and improvement of existing buildings, in particular by an intensified heat insulation, more efficient heating installations and modern control technology.

In order to mobilize the big potentials in the supply with space heating, it is, in particular, models for the financing by third means helping to overcome the investor / user problem that are to be elaborated and established (contracting). The suppliers of these extensive service packages are to allow to provide the financing, to execute sanitation and to settle the repayment of the prefinanced means with „a signature“.

The Thermoprofit initiative aims at adapting the 1690 GWh of energy necessary for space heating and hot water every year by 2010. Due to the reduction of this energy consumption, appr. 370 000 tons CO₂ can be avoided every year, i. e. 22 per cent of the CO₂ Emissions of the year 2010 according to the reference development.
Present Situation and Future Perspectives
Contracting Models in this sense have already been tried on appr. 90 objects belonging to the Municipal Authorities. For the documentation of the energy related quality of the envelope of the building and the entire system, an Energy Voucher has been developed. The further activities in this initiative are:

a) Elaboration for special target groups of specific sample contracts
b) Creation of supplier structures for the Thermoprofit Model
c) Thermoprofit Priority in energy consulting in Graz
d) Providing „cheap money“ for Thermoprofit Investments
e) Activities for changing the legal situation
f) Evaluation and adaptation of the Thermoprofit Model

A considerable contribution to the implementation of this initiative is also to be made by the Municipal Energy Agency that is being founded.

Reference to Agenda 21
4,6,7,8,9,30,33,34,36,39,40

Documents
KEK Report No. 19
KEK Report No. 21: Project No. 60 (File 9)
Newspaper articles
In this scientific cooperation between the Administration and the Inter-University Research Center for Technology, Work and Culture, the problems of the climatic issue were presented, and municipal strategies for the protection of the earth atmosphere were elaborated.

Documents
Boris Papousek, Karl Heinz Lesch, Municipal Strategies for the Protection of the Earth Atmosphere based upon the Example of the City of Graz, Series of Documents of the Inter-University Research Center for Technology, Work and Culture, Issue 20, Graz 1992
Boris Papousek, Karl Heinz Lesch, Methode for Determining Reduction Potentials of Climate Relevant Trace Cases for Municipalities, Issue 24, IFZ Graz 1995

Present Situation and Future Perspectives
This project has been finished, and the results have been incorporated into the Environmental Program „Ökostadt“ (Ecological City), the Agenda 21 as well as into the Municipal Energy Concept KEK („Kommunales Energiekonzept“). Due to the close cooperation between the Universities of Graz, the relevant Research Institutes and the Municipal Administration of Graz, it is possible to prepare the bases for finding the political decisions according to the state of the art.

Reference to Agenda 21
4,7,8,9,10,19,20,28,31,33,34,35,36,39,40
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Project Title
"Day of the Sun"

Content and Aims
The "Day of the Sun" is an international campaign day centred around providing information on the utilisation of solar power. Each year an information event is held at the main square in Graz. DIYers and manufacturers have the opportunity of presenting their products related to solar collectors, photovoltaics and other alternative forms of solar power utilisation.

Present situation and Future Perspectives
The population of Graz is informed in-depth about utilisation of solar power, giving rise to a number of DIY solar collector groups each year. In the long term, the aim is to change public awareness in Graz as to the possibilities of utilising solar power.

Reference to Agenda 21
4, 7, 8, 9, 34, 36, 40
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**Project Title**
Solar Collector Construction Festival

**Content and Aims**
The aim is to provide concrete information and practical experience about DIY solar collector construction. Each year in spring - for the sixth time now in 1996 - the Graz Solar Collector Construction Festival is held. Alternately at the main square, the municipal depot or at the Ortwein school - HTBLA in the Körösistraße, this event is held in collaboration with schools, also constructing and presenting solar collectors. Manufacturers and companies have the opportunity of presenting their products to the population of Graz.

**Present situation and Future Perspectives**
Each year around 500 to 1000 citizens of Graz come to inform themselves. In the long term the aim is to change public awareness as to the possibilities of utilising solar power both for the participating schools and also for the population of Graz.

**Reference to Agenda 21**
4, 7, 8, 9, 25, 34, 36, 40.

**Documents**
Newspaper articles
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Content and Aims
These “reference” brochures are planned to be a counselling aid for the population of Graz. To date, this includes brochures on subsidies for energy-saving measures and advisers on energy consumption of household appliances.

Present situation and Future Perspectives
Since 1987, there have been brochures on possible subsidies in Graz pertaining to thermal insulation, converting to district heating, use of alternative energy etc. Another brochure on energy consumption of household appliances (first 1990, last update 1996) compares best values of fridges and refrigerators, washing machines, dryers and dishwashers.

These are published and updated at irregular intervals of several years by the energy advice centre of the city of Graz, in some cases in collaboration with other institutions.

Reference to Agenda 21
4, 8, 9, 30, 34, 36, 40.

Documents
Brochure: “Energy consumption of household appliances”, 1990 (Project No 15, File 4)
Brochure: “Energy consumption of household appliances”, 1992 (Project No 15, File 4)
Institution
Magistrat Graz, Amt für Umweltschutz,
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Project Title
Solar Facilities for the Women’s Housing Project

Content and Aims
A Women’s Housing Project is currently being installed with 11 housing units for women and single mothers. A 70 m² solar facility has been included in the project which will supply hot water during the six summer months and which will also provide part of the room heating. The project is to be pre-financed by means of a contracting model by the Grazer Stadtwerke AG and then refinanced by sale of solar-heated hot water.

Present situation and Future Perspectives
The project is being built, the large buffer storage has already been installed in the cellar. This is one of the first facilities in multiple dwellings in Graz to be planned, financed and operated with the aid of this forward-looking model. The aim is to offer this solution to building clients and associations for future larger new buildings, thus reducing the investment sum for the client and also making a contribution to environmentally friendly provision of hot water.

Reference to Agenda 21
3, 4, 7, 8, 9, 24, 25, 30, 31, 33, 34, 36, 40.
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Grazer Stadtwerke AG / Fernwärme
Dipl. Ing. Waldemar Neumann
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Project Title
Municipal Energy Concept -
Clean Heat

Content and Aims
This initiative of the city of Graz and the Grazer Stadtwerke AG is aimed to extend and densify district heating and natural gas supply in Graz along the lines of the priority regions indicated in the 2.0 zoning plan 1992. Outside the district heating and natural gas supply priority area, biomass (wood chippings, local heating generated with biomass) is to be increasingly utilised for room heating and hot water supply. Furthermore, the possibility of utilising biomass in the existing district heating plants at Puchstraße, Mellach and Wernsdorf should be reviewed. The objective is to increase household link-ups to the district heating network from currently 3000 to approx. 5000 by the year 2010 and to step up household gas connections from currently 13000 to 21000.

Present situation and Future Perspectives
There is currently a socially graduated subsidy for costs of household installation when changing to the district heating system which can amount to as much as 75 % of the total investment. The most important point in connection with the “Clean Heat” initiative is, however, the ordinance for compulsory link up to the district heating network. The Municipal Energy Concept is the basis for this ordinance which is to be approved by Graz local council by the end of 1996. This ordinance will make it possible not only for new buildings but also existing buildings to be connected to the district heating network by means of official procedure.

Reference to Agenda 21
4, 6, 7, 8, 9, 10, 30, 33, 36, 40.

Documents
KEK report No: 19 (Project No 19, File 9)
Information material: Grazer Stadtwerke AG / Fernwärme
Video: Fernwärme in Graz
Institution
Magistrat Graz, Amt für Umweltschutz,
Referat für Energie und Klima,
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Project Title
Solar Initiative

Content and Aims
Pushing ahead the distribution of solar collectors for direct thermal use of solar energy for warm water preparation, partly solar room heating and heating of swimming pools. In addition to further development of DIY solar system construction, collectors should increasingly be used for new buildings, in the public swimming baths of Graz, on sports and leisure time facilities, in trade and public buildings (as demonstration objects) as well as in municipal buildings.

Present Situation and Future Perspectives
By the end of 1994, 10,000 m² of solar collectors were installed in Graz. 200,000 m² are aimed at by the year 2010, which could provide 76 GWh of solar heat per year, corresponding to approx. 4% of the warm water and heat consumption of private households. Due to the substitution of fossil sources of energy, this would lead to a reduction of approx. 16,000 t CO₂ per year. The required investment of approx. 8,3 mill ECU are of major importance for the regional economy.

Reference to Agenda 21
4, 7, 8, 9, 30, 33, 36, 40

Documents
KEK report No. 19 (Project No 62, File 9)
Institution
Magistrat Graz, Amt für Umweltschutz, Referat für Energie und Klima, Griesgasse 11, A-8020 Graz.

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Project Title
Heater Training

Content and Aims
The aim of heater training is to motivate and train heating system operators of the municipal authorities of Graz (school janitors, caretakers etc.). Training includes general knowledge of heating, control technology and maintenance.

Present situation and Future Perspectives
Since 1986, heater training has been carried out at irregular intervals. Training was initially aimed at all heaters at the municipal authorities, later the operators at the converted buildings were also included (see heating system conversions of municipal authority buildings). Since 1992 private caretakers in council housing have also been included in the training programme. In future, an aim of training heating system operators is to nominate an energy spokesman per building.

Reference to Agenda 21
4, 7, 8, 9, 10, 18, 28, 29.

Documents
KEK report 8,
KEK report 21 (Project No 60, File 9)
In the period from 1989 to 1994, the heating systems of a further 33 buildings were converted in addition to those converted and subsidised between 1987 and 1990. These conversions to the environmentally friendly sources of energy, district heating and natural gas, brought savings of annual energy consumption of 10,935 MWh. That corresponds to savings of 40%. These energy savings and the transition to environmentally friendly sources of energy have resulted in notable reductions of emissions. With this, the city of Graz has set a good example to its population, reducing the classical pollutant emissions of the buildings to be converted by 72 to 99% and climate-relevant emissions of CO2 by almost 60%. Without the "consumer energy model" it would not have been possible to enact these conversions at this date. The air in Graz and thus the population of the provincial capital would have been further burdened by the outdated heating systems for decades to come. The investment costs for these heating system conversions were approx. 4.45 mill. ECU.

Present situation and Future Perspectives
To date, 68 buildings have been converted along the lines of this model. Currently, a new section is being prepared for heating system conversion. The financing model is to be extended to include building renovation (thermal insulation etc.) and a special call for tenders mode for guaranteed savings is to be elaborated.
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Project Title
Operator Model: Biomass Heating for Ries Primary School (PS)

Content and Aims
Ries PS was converted to biomass heating by means of an operator model and, at the same time, the most important thermal insulation measures were carried out. A forester set up, funded and operates the heating system. The city of Graz has concluded a heat supply contract with the operator for the next 15 years.

Present situation and Future Perspectives
The heating system has been in operation for two years now. It is planned to erect other biomass facilities by means of the operator model in the inner-city area.

Reference to Agenda 21
4, 9, 10, 14, 25, 28, 32, 33, 36, 40.

Documents
KEK report 8 (Project No 70, File 9)
Institution
Magistrat Graz, Amt für Umweltschutz,
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Project Title
Municipal Energy Concept (KEK) -
Municipal Energy Management (KEM)

Content and Aims
The main focus of energy controlling at municipal authority buildings is monthly monitoring of energy consumption by reading meters and transmission of these data by the heating technician to the energy section. By regularly monitoring energy consumption, it was possible to save approx. 20 % of energy or around half a million ECU p.a. The heating system technicians are trained at regular intervals.

Present situation and Future Perspectives
In the near future it is planned to install electronic energy consumption data transmission for the largest municipal authority buildings. In addition, controlling is to be extended to include electricity and water consumption.

Reference to Agenda 21
4, 8, 9, 10, 36, 40.

Documents
KEK report 8 (Project No 70, File 9)
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Wirtschaftshof 0316/29 56 25

Project Title
Decentral collection of used cooking oil and fat in Graz as logistic prerequisite for the intensified use of machines driven by biodiesel

Contents and Aims
This project aims at optimizing the collecting system for used cooking oil and fat. The collection done by the City of Graz is optimized by the service „single collection in households” and the installation of a further stationary collecting station. Furthermore, the operation of the entire transport park and machinery of the non-profit service company ÖKO Service GmbH is being converted to biodiesel.

Present Situation and Future Perspectives
· Presentation of the project at a press conference
· Execution of various information events
· Issuing the collecting containers and information material for the households
· Installation of the collecting station on the premises (1000 liters collection tank for for used cooking oil with suction plant)
· Execution of the decentral collection (collection in the houses)
· Continuous statistical evaluations on the collected quantities

Reference to Agenda 21
4, 9

Documents
Information material
Contents and Aims
According to the report of the Federal Government to the National Council in August 1988, appr. 8000 tons of propellents were circulated and used in Austria every year. About 4000 tons of the annual consumption alone went to propellents in sprays. The hazardousness of CFC’s was demonstrated in various scientific studies.

In order to support the use of products free from propellents, the Waste Consulting Agency of the „Wirtschaftshof Graz“ prepared a positive list, which exclusively contained products free from propellents. In order to extend this positive list, Companies producing products free from propellents were asked to communicate this to the Waste Consulting Agency.

Furthermore, the „Wirtschaftshof Graz“ purchased a suction implement for the CFC Refrigerants in refrigerators and used it for sucking off the coolant in refrigerators at the clearance of junk in the Districts.

The CFC Fluid was collected in the bottles intended for this and delivered to Hoechst Company for recycling.
Present Situation and Future Perspectives

Due to these activities, the City of Graz was nominated the first city of the products free from propellants.

Furthermore, the Waste Consulting Agency cooperated with the Fire Brigade of Graz to show that the Substitute Propellants of propane and butane used in sprays in household products were combustible and explosive. Another campaign was made against the Substitute Propellant of F22 in coolants, which is not much less threatening.

By doing this, we tried to make sure that sprays (except for but few exceptions) would only be free from propellents in future, i. e. that they would be available on the market with mechanical pumping systems, and that it would be possible in future to buy refrigerators free from CFC’s.

Newspaper articles

Kronen Zeitung-, "Graz, the City without Propellents"
Graz Aktiv-, "The City of Graz Challenges Propellents"
Kleine Zeitung-, "The Ozone Hole for Half the Price"
Kronen Zeitung-, "Busy Clearance Sale of the Ozone Killers"
Neue Zeit-, "Ozone Killer has been discarded"
Kurier, "Now Bargain Sale: The Ozone Hole for Half the Price"
Wahrheit-, "Alternative Offers for Propellent Sprays"
Die Presse-, "Propellents"
Neue Zeit-, "CFC Bomb is Ticking Everywhere"
Neue Zeit-, "No More Propellents"
Handelskammer-, "Products free from Propellents"
Kleine Zeitung-, "Just don’t buy this Stuff any more"
Neue Zeit-, "Old Refrigerators are being Detoxicated"

Reference to Agenda 21
9, 4, 36

Documents

- Positive list of products free from propellents 1988 with a positive list of traders in Graz *
- Positive list of products free from propellents 1990 with a positive list of traders in Graz *
- Information Sheet "Ozone"
- Public comment to the "Substitute Propellant F22"
* available in the "Wirtschaftshof"
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Wirtschaftshof 0316/29 56 25

Project Title
Fleet experiment with „Ecological Diesel“ for municipal vehicles

Contents and Aims
The project aims at using fuel for vehicles that is, on the one hand, derived by the recycling of used cooking oil and is, on the other hand, produced from a renewable raw material (colza).

Present Situation and Future Perspectives
Since this year’s March, two vehicles of the municipal „Wirtschaftshof Graz“ driven by diesel have been driven with methylester gained by the transesterification of cooking oil (AME - „Altspeiseölmethylester“) in order to try and to scientifically study its use.

This trial run is done within a project of the Styrian Cooperative Energy and Albumen Production Association (SEEG - „Steirische Energie- und Eiweißerzeugungs-genossenschaft“), the Institute for Organic Chemistry of Graz University and the Institute for Combustion Engines and Thermodynamics of the Technical University of Graz. The trial run is to last appr. 1 ½ to 2 years. A waste collecting vehicle and a small delivery van are used as trial vehicles. Both vehicles are equipped with oxidation catalytic converters in order to avoid the
exhaust gas smell typical for the AME Operation (deep-frying pan) as far as possible. Furthermore, the rubber parts getting into contact with fuel were slightly modified.

The engine compatibility and emission behavior are examined at measurements according to a test cycle performed by the Technical University of Graz.

The experience gained up to now have not shown any special restrictions as compared to diesel operation.

If the experiment has positive results, there are considerations on using AME even more in future after this trial run.

Apart from this, the City of Graz endeavors to extend and develop the existing collecting system for used cooking oil.
### Institution
Magistrat Graz  
Wirtschaftshof  
Sturzgasse 5-7  
8010 Graz

### Project Title
Taking into operation of a gas recirculation plant in the filling station owned by the municipal „Wirtschaftshof Graz“

### Contact
Wirtschaftshof 0316/29 56 25

### Contents and Aims
The emitted noxious gases (benzene vapors, hydrocarbons) do not only directly affect the health of the persons present at the filling stations but also largely endanger the entire environment, (e.g. ozone impact).

The project aimed at taking a filling station with a gas pendulum line into operation in order to exert pressure on the legislator by giving a good example.

### Present Situation and Future Perspectives
The municipal „Wirtschaftshof Graz“ was one of the first operators of filling stations in Austria and, as far as we know, one of the first in our Province of Styria, that has felt obliged to install a gas recirculation plant as early as 1990. In the meantime, the installation of such plants has been stipulated by a law.

The „Wirtschaftshof Graz“ aimed at taking the concept of environmental protection into account and to act as pioneer and give new impulses.

The own filling station serves to supply numerous small appliances as well as 100 municipal motor vehicles with gasoline. The fuel consumption amounts to appr. 200 000 litres a year.

### Reference to Agenda 21
9
Contents and Aims

The area of the municipal „Wirtschaftshof Graz“ comprises about 30 000 m². On the premises, there are numerous workshops, garages, operating and administration buildings. The supply with heat for heating and hot water used to be done by six individual oil-burning installations. The required annual energy consumption amounts to appr. 1500 MWh. Therefore, cost related and environmental reasons have resulted in the absolute necessity to create an energy related sanitation concept.

Present Situation and Future Perspectives

In 1988, the first measure to be implemented was the connection of the entire premises to the long-distance energy network. This measure was made more difficult by the fact that the area in which the „Wirtschaftshof“ has its site was not sufficiently supplied with long-distance energy yet and that it was very difficult and required great efforts to raise the funds required for the conversion.

Then it turned out that there was not sufficient heat for hot water production in sanitary installations and had to be supplemented by electric power. Furthermore, the two spraying chambers still had to be operated by a single oil-burning installation because the energy demand was too high.

In this context, it was also for reasons of environmental protection and cost minimizing that there
were still starting points for improvement.

For example, the remaining oil-burning installation was replaced by a gas-burning installation, and a solar installation of about 50 m2 was erected for hot water preparation at a suitable site.

Further measures were taken in the improvement of the unit heaters, the controls, the servomotors, the frequency controlled pumps, etc. Another measure for the further minimizing of energy consumption that is attached much importance to is heat insulation in required areas, such as roofs and windows.

The measures have, from the beginning, aimed at:

the City of Graz giving a good example

saving energy, reducing energy cost

reducing pollutant emissions

using alternative energies in office buildings

sensitizing the employees for alternative energies by their assembling the solar collectors themselves

Reference to Agenda 21
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Project Title
Electric car

Contents and Aims
The electric car is free from exhaust gas and therefore during the use ecologically beneficial. Therefore, electric vehicles are at the beginning of a developing stage that is not fully predictable. By the middle of the next century, a shortage of mineral oil has to be expected, and some industrialized countries are interested in the production of this kind of vehicles even now, which is, to a certain extent, due to the fact that they see the necessity. In future, the electric car will, in particular, have to replace the usual small vehicle driven by gasoline or diesel in areas of concentration.
Present Situation and Future Perspectives
The City of Graz and the „Wirtschaftshof“ resp. feel obliged to act as pioneers by using electric cars. Apart from this, the use of such vehicles is to recruit people interested, and contacts with the vehicle industry are to make contributions to making improvements for the further development of electric vehicles.

Currently the City of Graz uses 3 electric vehicles, which are exclusively used as official vehicles for traffic within the City of Graz. It is a question of two passenger cars by Fiat and VW resp. and a small vehicle produced by Melex, which is used for emptying the wastepaper basket and cleaning the streets at the street cleaning at night.

The first electric vehicle, Fiat Panda, was put into operation as early as 1989.

The purchasing of further vehicles is planned. However, the producers will, in particular, have to improve the drives, weights and batteries so that the electric vehicles are, to a point, of the same standard as usual vehicles.

Reference to Agenda 21
Documents
Experience report
Contents and Aims
The Landfill Köglerweg was one of the first landfills in Austria, which was equipped with a plant for forced degassing and thermally used the gained developing gas.

The developing gas is permanently sucked off from 178 gas wells with appr. 40 vol% CH₄, conducted via overground transportation lines (appr. 6 km) and a distributing station to the compressing station, where it is cooled and dewatered and from where it is conducted via a PE Line with a length of appr. 4 km to the long-distance heating and power station of the Steweag (Regional Energy Supply Company), where it is thermally used.

Present Situation and Future Perspectives
In 1996, the power output has decreased from initially (1985) 2000 megawatts to appr. 1000 megawatts. However, this can be traced back to the continuous anaerobic decomposition in the landfill.

As the gas developing on the landfill is sucked off, damage to crops and noise nuisance caused by an uncontrolled discharge of gas is prevented.

According to the current knowledge on gas developing on landfills, the end of gas production cannot be expected until 2010. Therefore, the forced degassing cannot be stopped before either.
Summary

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CONCEPT 1990 ............................................ 134

Priority areas for long-distance energy
and natural gas .............................................. 136
Contents and Aims
The local development concept lays down the long-term development objectives on the basis of the results of the situation report, taking into account zoning principles. The urban development concept contains the planned ecological, economic, social and cultural development of the municipal area, specifically:

- Objectives and measures aimed at safeguarding the natural balance and the natural environment;
- Statements on population development and the future housing structure;
- Statements on economic development and planned distribution of opportunities of gainful employment, trade and industry, trade and service facilities (shopping centres);
- Objectives with regard to cultural and social needs and leisure facilities;
- Objectives and measures pertaining to energy balance, supply and disposal;
- Traffic, principles and objectives of traffic policy and
- A spatial model of development.

Focus
Although the Urban Development Concept 1980 contained proposals, objectives and measures aimed at protecting and enhancing the environment, special attention was paid in its continuation to natural elements of life and the protection of the human habitat and the resultant social aspects, and also to minimising energy consumption. In implementing the objectives, it must thus be investigated whether these will have repercussions and effects on the natural elements of life - air, water and soil - and whether any social disadvantages could arise. This is the basis of action priorities at all levels.
Present Situation and Future Perspectives

In broad principle, the STEK 1990 was meant as a basis for decision-making for the 2.0 Zoning Plan 1992 of the Provincial Capital of Graz (usage of regional resources, green spaces etc.) and as a “Central Concept” for subsequent special programmes such as

- Green spaces programme (to be completed by autumn 1996)
- Air cleaning programme (local energy concept)
- Noise reduction programme (currently being elaborated)
- Waste water disposal concept (sewers department)
- Traffic
- Economy and others.

The Urban Development Concept shall be continued on a 5 - 10 year basis in accordance with zoning legislation provisions as at each revision of the zoning plan. The next revision will be as of 1997.

Reference to Agenda 21

10

Documents

Urban Development Concept, brochure with integrated maps, copies 2500
Institution
Magistrat Graz, Amt für Umweltschutz,
Referat für Energie und Klima,
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Project Title
Priority areas for long-distance energy and natural gas

Contents and Aims
The division of the densely populated municipal area into 2 priority areas is to guarantee a low-emission supply of the City of Graz with heat. The priority areas for long-distance energy and natural gas are fixed in City Development Concept and the Zoning Plan of the City of Graz and also express the interest vis-à-vis the „Grazer Stadtwerke AG“, which must not offer any new gas connections in the priority area for long-distance energy.

Present Situation and Future Perspectives
The priority areas were voted for the first time in the City Development Concept in 1990 and later adapted in the 2.0 Zoning Plan in 1992 for the first time. During the preparation of the Municipal Energy Concept, they were revised once again, and the priority areas for long-distance energy were voted as developing possibilities for the extension of long-distance energy by the year 2000. In connection with an obligation to be connected to the long-distance energy network, which suggests a higher density of connection, the extension of the areas for the connection to the long-distance energy network is being discussed once again.

Reference to Agenda 21
4, 6, 7, 8, 9, 10, 30, 36, 39, 40.

Documents
City Development Concept (Project No. 81, File 10), 2.0 Zoning Plan 1992
KEK Report No. 21 (Project No. 60, File 9)
KEK Report No. 7, Newspaper articles
Agriculture

Landwirtschaft

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14
Summary

Promotion of alternatives to the use of toxic chemicals in agriculture ................................ 139
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Contact
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Project Title
Promotion of alternatives to the use of toxic chemicals in agriculture

Contents and Aims
By installing an Agricultural Advisory Council <see Agenda 21, Item 32> in 1993, previous local promotion policy for vegetable, fruit and general farming has largely been re-adjusted - instead of toxic chemicals, now alternative means are being promoted: protective foils and bird nets, use and support of beneficial insects, technical monitoring of field sprayers in order to minimise use of sprays and more.

Present Situation and Future Perspectives
80 % of the annual volume of assistance payments, i.e. ECU 14,222.22 p. a. have thus been reallocated.

Vegetable, fruit and general farmers in Graz have switched over to direct marketing with the aim of achieving greater market proximity and have at the same time changed their range of offer towards biologically grown produce. They see this approach as their special market opportunity in comparison to big concerns. The city of Graz is contributing to this change-round of consumer patterns with its assistance policy <cf. Agenda 21, Item 4>

Reference to Agenda 21
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Biological Variety
Biologische Vielfalt
Summary

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Project Recommendation Schloßberg .......... 143
GREEN SPACES PROGRAMME .................. 145
Protected Area of Friesach Water Plant ...... 147
In 1985, various schools in Graz (Primary Schools, Secondary Modern Schools, Professional and General-Knowledge Secondary Schools - „Volksschulen“, „Hauptschulen“, „B(erufsbildende) H(öhere) S(chulen)“ and „A(llgemeinbildende) HS“) assumed the sponsorship for brooks in Graz. The schools were entrusted with taking care of a certain section of the brook.

This project has, as already mentioned, existed since 1985 and will be continued in cooperation with the „Wirtschaftshof Graz“ and the Supervisory School Authority („Stadtschulamt“).

In project teaching, the school classes make sure the embankments and beds of the brooks are kept clean.

This does not only help to increase the environmental consciousness of the pupils but also to create a special close relationship to the brook as ecological space that goes beyond the school years.

Furthermore, 18 schools in Graz have laid out biomesadows („Biowiesen“) that are cultivated by the Caretakers of Municipal Schools („Schulwarte“).

In cooperation with the schools and the Parents’ Associations, biotopes that are cultivated by pupils and teachers were installed.

### Present Situation and Future Perspectives

Furthermore, it should be noted that the School Representative of the City Council („Stadträtliche Referentin für das Schulwesen“) funds the Project „GLOBAL 2000“ - Environmental Film Days in Graz („Grazer Umweltfilmitage“).
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Magistrat Graz
Amt für die Stadtentwicklung und Stadterhaltung
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Contact
Dr. Hansjörg Luser 872/2022
Dr. Gerhard Ablasser 872/4201

Contents and Aims
Graz would like to progressively implement the intended positioning as Center and Turning Point of the Southeast. The Schloßberg - as the Landmark of Graz and Point of Identification - is to considerably contribute to the City of Graz acquiring an even stronger image in future. It is to represent the Profile of Graz (Tradition & Modernity - Production & Interaction) in a trend-setting way and show a place of extensive communication, learning, leisure and meeting opportunities.

In order to fulfill this requirement, the Dept. 10/7 of the Municipal Authorities, Office for Urban Development and Conservation („Mag.Abtl. 10/7, Amt für Stadtentwicklung und Stadterhaltung“) has, based upon a relevant political freewill decision, assumed the important task to subject the „exterior and interior“ Schloßberg Area to an overall inspection in order to revive the City Center of Graz and give an economic impetus. This project has aimed at preparing a Project Recommendation for a Competition of Investors and Operators.

After a multistage developing process, the Project Recommendation was voted by the Municipal Council of the City of Graz on March 14th, 1996.

Present Situation and Future Perspectives
As keynote the Schloßberg is to represent the tension between tradition and innovation. The Project Recommendation is divided into two sections:
a) The Exterior Schloßberg particularly is to be dedicated to the Topic Ecology and Culture. The existing variety on the Schloßberg should be preserved and developed in the sense of a Municipal Natural Oasis (natural area, resting area, family...
of „multimedial communication opportunities“ and their impacts on man. Investors are to help to supplement an innovative utilization of the extended area as magnet (e. g. IMAX / 3-D Cinema) by a series of other ways of utilization (Visitor Center, Cultural Axis, Staging the „Zeughaus“ (Armory), Mineral Show, etc.).

The interior of the mountain is to supplement the City Center but not compete with it. The presentation of highlights of Graz in a historical respect (Joanneum, Zeughaus, etc.) but also in a modern and technical respect (Digital Styria, Virtual Fair, etc.) is to arouse and intensify the visitor’s interest in the City.

Reference to Agenda 21

7, 15

Documents

Brochure “Project Recommendation Schloßberg”
Contents and Aims
In the knowledge of our responsibility for generations to come, it is necessary that the city of Graz ensures that its green spaces are preserved and protected, that any shortcomings are remedied and that the quality of these green spaces is enhanced. A "Green plan taking into account local recreation areas” GREEN SPACES PROGRAMME was adopted as an additional programme into the working programme for the local council term 1993 - 1998.

Drawing up a programme of this nature is necessary in order to have an inventory of objectives and measures on a clear-cut legal footing in addition to the general aims of the urban development concept.

The GREEN SPACES PROGRAMME is divided into:

a) Representation of present situation (findings - shortcomings - definition of problems)
b) Definition of objectives taking into account the following principles:
   • further worsening to be avoided - protection;
   • problems and shortcomings to be remedied asap - renewal;
   • green spaces to be enhanced in terms of quality - improvement.

c) The following topics will be dealt with in the findings and at the measures level:
   • legal situation
   • green in public areas
   • green belt
   • environment and landscape protection
   • woods
Biological Variety

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• public green spaces
• private green spaces
• allotments

d) Basic principles:
• Urban Development Concept 1990 (Chapter 2, "Natural Spaces and Environment")
• Biotope mapping: cf. "Biotope mapping", ZIMERMANN 1989
• Climate: cf. "Urban climate analysis Graz", LAZAR 1994

Present Situation and Future Perspectives

Work on the Green Spaces Programme was commenced at the end of 1993 and is to be completed with the presentation of a draft discussion for the time being by autumn 1996. Some of the objectives and measures contained in this are currently being implemented (purchase of the Buchkogel, renting the Oeverseepark, renting a large open area in Andritz etc.) and are to serve as a guideline for future utilisation of existing green spaces and also new provision. In addition, the idea is to develop perspectives for the urban development concept to be continued and for the zoning plan with the aim of improving green spaces in the districts of the city and of safeguarding ecological compensatory areas.

Reference to Agenda 21

9, 10, 11, 13, 14, 15

Documents

* Brochure with maps, in preparation
* Brochure "Stadtanalyse"
Institution
Grazer Stadtwerke AG
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                      Fax: 887-768

Project Title
Protected Area of Friesach Water Plant

Contents and Aims
The Water Section of the Grazer Stadtwerke AG has set up an apple tree culture with old Styrian apple varieties in the protected area of Friesach water plant - 15 km to the north of Graz. This culture is run without any fertilisers or pesticides.

Another project involves planting part of the protected area of Andritz water plant with suitable shrubs and trees providing habitat for birds that feed on pests and that are not granivores.

Present Situation and Future Perspectives
The aim is to enable biological farming in the long term that requires no chemical pesticides with nature largely taking care of pest control and closing natural cycles. If this project works out, it is to be expanded in future.

Reference to Agenda 21
15

Documents
Report in IMPULS magazine I/96 - Magazine of the Grazer Stadtwerke AG
Summary

ÖKOPROFIT - Water .................................. 150
Groundwater sanitation
Landfill Köglerweg .................................. 152
Drinking Water Supply of the
City of Graz ............................................ 154
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Project Title
ÖKOPROFIT - Water

Content and Aims
The provision of drinking and industrial water and the disposal of waste water are becoming more and more of a problem in Austria. In Graz, too, considerable political discussions concern both the provision of water (mountain spring water supply) and waste water disposal (expansion of the Gössendorf sewage works). The environmental program includes clear guidelines for solving these problems. In order to achieve target-oriented economic and ecological measures for water supply and waste water disposal steps have to be taken at the "source", i.e. the consumer. Well-founded preparatory work is required in this context.

Target-oriented development of companies based on the ÖKOPROFIT award is a cost-efficient and effective way of solving the afore-mentioned problems.
Present Situation and Future Perspectives
Establishing a water balance for Graz, i.e.

- Importance of the individual sources (public supply, ground water, surface water)
- Importance of the individual consumer groups (industry, large-size trade enterprises, households, others)
- Amount and course of total waste water
- Parameters responsible for exceeding the limit values of the sewage plant
- Documentation of the main waste water emitters (as far as data is accessible)
- First contacts to the main emitters and informing them about the development of emissions and general possibilities of avoidance and reduction

EDP presentation of the water balance in order to be able to make calculations for other scenarios.

Interpretation of the collected data with regard to the measures to be taken

- in order to reduce water consumption (in the spirit of STEK Graz)
- in order to reduce waste water emission into the river Mur.

Reference to Agenda 21
18, 21

Documents
SANKEY-diagram - water - balance Graz
Contents and Aims

From 1965 to 1985, the City of Graz had a Landfill within the municipal area. Due to studies of the groundwater in the groundwater discharge area of the Landfill, contaminations were detected, and the City of Graz was entrusted with sanitation by the Water Right Authority („Wasserrechtsbehörde“).

After a study of versions, a partial encapsulation of the Landfill by means of a subterraneous curtain retention wall and a series of 11 wells for extracting gravitational water with an extracting performance of 6 l/sec was approved relating to water right by a ruling of the Styrian Government. The former Landfill has a superficial extent of appr. 170 000 m², contains a volume of dumped waste of appr. 2 mio m³ and served for the disposal of the waste produced by appr. 240 000 inhabitants.
Present Situation and Future Perspectives
The former Landfill has been partly encapsulated by a subterraneous curtain with a thickness of 60 cm, an average depth of 20 m and a length of appr. 1 100 m in the groundwater discharge area. At its base, the retention wall integrates at least 2 m into a dense bottom layer (kf < 10^-8) and has a density of kf < 5 x 10^-9.

The infiltrating groundwater and the atmospheric water (gravitational water) coming from the area of the Landfill is collected by 11 vertical filtering wells (d = 800 mm) and fed into the public sewage system by means of a central pumping station. The system of the wells collecting gravitational water is connected to the plant collecting gas developing in the Landfill (see further description of the project).

The success of the measure is continuously being monitored so that we can state today that the groundwater level has, in the meantime, returned to normal in spite of the massive intervention and that the groundwater in the discharge area has the quality of drinking water again.

The sanitation cost amounted to appr. 3,02 mio. ECU and were subsidized by means of the Federal Water Conservation Fund („Wasserwirtschaftsfonds des Bundes“).
Contents and Aims

The drinking water supply of the City of Graz is taken entirely from ground water reserves. The quality of the ground water is so excellent that the water can be supplied to the consumer as completely natural drinking water without any upgrading procedure, disinfection or any other treatment. After a continuous increase up to the year 1985, the amount of water withdrawn from the ground water reserves has continuously decreased for 10 years and is presently 25 % below the level of 1985. This is due to both the utilisation of water saving potentials by the consumers and the successful efforts on the part of the public utility company Grazer Stadtwerke AG to reduce the transport losses which are presently below 7 % and compare very favourably to the values achieved by utility companies elsewhere.
Present Situation and Future Perspectives

The measures required to preserve both the quality and the quantity of the ground water reserves are taken by the two waterworks of Andritz and Friesach which, together, account for 70% of the water supplies, and consist of the artificial heightening of the ground water level by the controlled percolation of surface water of an adequate quality. The resource management strategy implemented to protect the ground water body and to prevent overexploitation consists of the mutual adjustment of the water volumes added by percolation, the ground water level, the runoff of the receiving water body Mur and the volumes of water withdrawn.

30% of the drinking water consumed by the population of Graz comes from the southern part of the Hochschwab region (approx. 70 km from Graz) and is supplied by the company Zentral-Wasserversorgung Hochschwab-Süd GmbH. The present projects to investigate and develop the water reserves in this mountainous region, which has remained largely untouched by anthropogenous influences, as well as the efforts to secure the exploitation rights for these resources will continue in the future in order to safeguard the quality as well as the quantity of the city’s drinking water supply and to secure reserves that can be used, if and when the need arises, to supply the city with drinking water.

The water protection areas created to protect the water production facilities are presently being re-examined in terms of both their expansion and the content of the protective regulations in order to adjust them to the present requirements and the state of the art in the field of ground water protection.

Reference to Agenda 21

Documents

Brochure "Trinkwasser für die Zukunft"
Brochure "Wissenswertes über das Grazer Wasser"
Brochure "Unser Wasser"
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Chemicals

Project 91

Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Wirtschaftshof 0316/29 56 25

Project Title
„Chemistry in the Household“

Contents and Aims
Since the middle of the fifties, chemical products have penetrated into all spheres of life. The big offer of household chemical with different compositions is no longer easy to grasp for the individual. Therefore, a critical handling of these products by the consumers is absolutely necessary. Even if the desire for facilitation of work is partly fulfilled, many desires are only specifically aroused by advertising.

We do not only know much too little about the effects of many household chemicals, but we also know too little about the extent to which our environment is endangered by problematic substances. In this context, we should remember that detergents and, cleansers will get into the sewage water during and after the use, solvents and propellents escape into the air, pesticides, fertilizers and deicing salt penetrate into the ground at a percentage of 100 % and the waste is loaded with tons of problematic substances (toxic waste).

The newspaper series „Poison in the Household“ is to make a contribution to eliminating these unwanted products. The „string of pearls of the avoidable coffin nails“ ranges from A like Automobile Washing to Z like Zinc Batteries.
Present Situation and Future Perspectives
The series „Poison in the Household“ shows that there are often alternatives that are, more or less, not dangerous at all. Even if (and we should be fair enough to add this) some substitutes require more effort and time.

The feedback from the population to this newspaper series has, from the beginning, been enormous. This circumstance confirms us in our intention to continue these series in future.

Newspaper articles
• Courage - Series „Poison in the Household“ from A - Z / duration: 2 years
• Neue Zeit - Series „Chemistry in the Household“ / duration: 5 months
• Abfalter - „Test of Problematic Substances“
• Soziale Technik - „Cleanliness, the bad conscience of our society“

Reference to Agenda 21
4, 19, 36

Documents
Newspaper articles
In Graz appr. 1.6 kg of problematic substances per inhabitant are produced every year.
Some of the substances causing chemical load in the household waste and are therefore defined as „problematic substances“ are: mineral oil waste, lacquer residues, solvents, poisons, chemicals, chlorinated substances, medicine, batteries, gas discharging lamps, and used cooking oil.
The City of Graz and the „Wirtschaftshof“ collect the problematic substances from households of Graz on 13 collecting stations every day, on 62 mobile collecting stations 2 - 3 times a week and once a week at the clearance of junk in the Districts. Problematic substances cannot be collected by using publicly accessible containers because a preliminary sorting and correct manipulation and conditioning at the site are absolutely necessary. Therefore, the personnel for handling problematic substances at the intended collecting stations of the City of Graz has to be correspondingly trained.
For this, the Waste Consulting Agency has prepared a „File of Problematic Substances“ for the information and training of this group of persons. The File of Problematic Substances includes the following items:
Division of groups of substances, sites of stationary and mobile collecting stations, Companies for the Disposal of Hazardous Substances in Graz, behavioral standards for the delivery of problematic substances by trading companies and doctor’s practices, abbreviations, safety measures, first aid measures, laws, decrees, definitions, statistics, tables, important phone numbers and a bibliography.
Present Situation and Future Perspectives
This „File of Problematic Substances“ is a training document and is to help to handle the collecting stations and as work of reference in case of unclarities. The File of Problematic Substances is continuously being supplemented or updated to the current status of the legal settings.
As this file was very well received all over Austria, it was soon unavailable.

Reference to Agenda 21
19, 4, 36

Documents
File of Problematic Substances
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Wirtschaftshof 0316/29 56 25

Project Title
Collection of hazardous substances from the household („problematic substances“) in Graz

Contents and Aims
The „Wirtschaftshof“ offers the population of Graz the possibility to deliver problematic substances at one of the 13 stationary collecting stations for problematic substances or at one of the 62 mobile collecting stations for problematic substances (Toxic Waste Express - „Giftmüllexpress“).

At the collecting stations, the problematic substances are divided into fractions according to their hazardousness and ways of disposal.
Present Situation and Future Perspectives

Problematic substances have been collected in Graz since 1983. 1995 saw the first reduction of the quantities of the collected problematic substances. This can be traced back to:

1. Changed legal settings
2. Increase in the ecological purchasing behavior of the population

Development of the quantity

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Reference to Agenda 21

19, 4

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- Information material
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Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Wirtschaftshof 0316/29 56 25

Contents and Aims
From 1984 to 1990, used batteries were collected in the schools of Graz by the „Wirtschaftshof Graz“. As the delivered batteries often were not correctly sorted, it was necessary to regularly attend to the schools. In this process, there were talks with the Headmasters, teachers and caretakers of the schools, and advice for improvements were elaborated. Furthermore, the results of the collection of batteries in the schools of Graz were evaluated once a year, three schools with the best collecting results being awarded prizes.

Present Situation and Future Perspectives
As the Battery Decree („Batterienverordnung“) that came into force in 1991 states, among other things, that batteries have to be brought back to the trader, the collection in the schools was stopped. Our recommendation for the schools is as follows: avoid throw-away batteries and use rechargeable batteries.

Reference to Agenda 21
4, 20, 36

Documents
Questionnaire on the arrangement of containers in compulsory schools
Certificates for the First Prizes from 1984 / 85 to 1990 / 91
In the municipal area of Graz, there are 49 pharmacies. In cooperation with the Chamber of Pharmacists and the „Wirtschaftshof Graz“, the population has the possibility to dispose of its used medicine or medicine whose durability has expired in the pharmacy free of charge. The pharmacists receive this medicine and prepare it for being picked up by the „Wirtschaftshof Graz“. The „Wirtschaftshof Graz“ will, upon request, pick up the collected old medicine and dispose of it correctly. This service is free of charge for pharmacists.

The share of used batteries in the total quantity of collected problematic substances amounts to 6.3%. 50% thereof will be taken by the pharmacies, and the rest will be collected to the mobile and stationary collecting stations for problematic substances.
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Compost Container Graz ............................. 177
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8010 Graz

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**Project Title**
Waste Water Disposal Graz

**Contents and Aims**
On the basis of a waste water survey in 1908 the first general sewer plan was completed in 1917. Since 1925, a combined sewage system has been installed in Graz.

In 1938 the city was expanded to six times its area. The scheduled extension of the sewer system was interrupted by World War II.

Due to the construction of the Graz-Süd Ground-water Plant in Feldkirchen, the south of the city was declared as a restricted catchment area. Owing to this and the latest findings, a new general sewer plan was elaborated in 1959. The main sewers were extended on the basis of this project. These were then linked up to the main sewer system. In the period between 1971 and 1974 the "Mechanical extension of the large waste water treatment plant Graz in Gösendorf" was erected with screens, sand catcher and sedimentation tank to be expanded up to 400,000 population units. In 1980 the "Biological extension" was put into operation (fine-bubble ventilation and atertreatment tank). Sludge treatment is by means of anaerobic stabilisation (heated digestion tanks). In accordance with the Water Act amendment in 1990, another waste water treatment extension is being tested (denitrification and phosphate elimination) on a semi-industrial scale. On the other hand, companies are being encouraged to pretreat their waste water to be output into the sewer system (indirect draining).
Present Situation and Future Perspectives

As far as the present situation and future perspectives of the project are concerned, it may be noted that constant sewage construction is under way in areas with buildings under construction as well as sparsely populated areas in the outskirts of the City of Graz. Furthermore, the Sewage Clarification Plant of the City of Graz in Gössendorf is being developed and updated to the state of the art (denitrification, elimination of phosphates). Furthermore, the dirt level is being calculated, and there is an instationary measurement of the quantity of sewage water in the entire sewerage network, which is to lead to an optimal reduction of the residual dirt level in the draining ditch by incorporating the waste from the rainwater discharge canals and the sewage clarification plant.

Reference to Agenda 21
18, 21

Documents
Copy „Water“ (Book), File 9
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
R. Egger /WH 0316/29 56 25
Ing. Daniela List /A23 0316/972710-13
AR Edith Kainz /A20 0316/ 850025-310

Project Title
Waste Management Concept of the City of Graz

Contents and Aims
This concept is based upon a vote of the Municipal Council dated July 7th, 1983 (GZ. (Case No.): WH (Wirtschaftshof) - 197/13 - 1983).
It is oriented towards the targets of a modern waste management that are acknowledged today: Avoidance, Recycling, Disposal.

In the Urban Development Plan 1990, the further implementation of the Integrated Waste Disposal Concept of Graz was voted with the following measures by the Municipal Council again:

1. Avoiding waste in production and consumption, intensified use of waste consulting;
2. Separated collection and recycling of used materials, of organic waste from households and gardens and of problematic substances;
3. Installation of plants for compost preparation
4. Eliminating pollutants in the sewage sludge by prepurifying the sewage water in industrial and commercial plants as prerequisite for an integration of the sewage sludge into the disposal concept.
Present Situation and Future Perspectives

A Waste Consulting Agency for consulting on and motivating to the avoidance of waste was established as early as 1983. Today there are six Waste Consultants.

Since 1985, used materials (paper, glass) have been collected in a dense network all over Graz; since 1992, bio-waste has been collected, since 1994 packing material.

Problematic substances have been collected since 1983 in the form of one mobile collection („Toxic Waste Express“) and 13 stationary collecting stations.

Bulky waste and used material are collected by two recycling yards (a third one is being planned) and by mobile collecting stations in the Districts.

In 1984, the Waste Processing and Disposal Co. Ltd. (AEVG - „Abfallverarbeitungs- und entsorgungsges.m.b.H." - today 51 % City of Graz, 49 % „Grazer Stadtwerke AG“) was founded and was entrusted with sorting the waste of Graz into a waste that can be composted or burned. The Plant for Thermal Use could not be implemented up to now.

Bio-waste has been composted in a plant of a private owner outside the City since 1992.

Tailings are dumped on a landfill of a municipal Company outside the City.

Today waste material and bio-waste that are collected separately and their utilization contribute to reducing the volumes on landfills with appr. 50 weight %.

A Waste Management Plan for determining further concrete steps for the implementation of the concept, (in particular the site of a Plant for Thermal Use), is being prepared and will come into force in 1997.

Reference to Agenda 21

21

Documents

Vote of the Municipal Council dated July 7th, 1983

Table, pictures and graphics for illustrating the implementation of the concept
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Wirtschaftshof 0316/29 56 25

Project Title
International events

Contents and Aims
1. Seminar Regional Waste Management in Graz 1987
   » Integrated Waste Management «
   Planning, technology, environmental pertinence and profitability of integrated waste disposal concepts as a contribution to helping the persons responsible in administration and business to take the appropriate decisions.

2. Seminar Regional Waste Management in Graz 1989
   » Ecological Waste Management «
   Ecological waste management means the priority of environmental compatibility of systems over economic criteria. This results in the hierarchy of targets Avoiding - Recycling-Dumping- Storing. The possibilities of avoiding waste were in the center of the seminar.

Present Situation and Future Perspectives
The project has been completed.

Reference to Agenda 21
6, 7, 8, 20, 21
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Wirtschaftshof 0316/29 56 25

Project Title
Compost is Humus for Tomorrow.

Contents and Aims
Based upon the Waste Management Concept of the City of Graz, the project has, since 1985, aimed at:

1. a maximum possible return of bio-waste to the natural cycle
2. promoting the citizens’ readiness to take responsibility themselves
3. a decentral compost preparation (individual and common compost preparation) by means of:
   • Information, consulting
   • Environmental education in nursery schools and schools
   • Papers / slide shows / exhibitions / parties
   • Planning and technical supervision of composting plants
   • Pilot projects / Subsidizing measures

Further promotion of the decentral compost preparation by:
• Chopping service / chopping exchange
• 15 % compost premium
• Public relations

Supporting Legal Measures:
• Waste Collection Decree („Müllabfuhrverordnung“) of the City of Graz
• Fee Decree („Gebührenverordnung“)
Present Situation and Future Perspectives

Status Dec. 1995:

- **Single Compost Preparation**: 8500 real estates / 14700 households / 34000 inhabitants
- **Common Compost Preparation**: 40 real estates / 1200 households / 2700 inhabitants
- **Compost Premium**: 8786 containers for tailings at a reduced fee
- **Reduction of Fees**: 200736.76 ECU

The decentral compost preparation makes people feel more responsible for handling waste, gives them insight into natural cycles, gives operators a sense of achievement, reduces the use of fertilizers and pesticides and allows a cultivation of house gardens that is close to nature.

Thus the single and common compost preparation makes a sustainable contribution to compost preparation all over the area within the Waste Management Concept of the City. On a long-term basis, the decentral compost preparation is to be established as integral part of the Waste Management of Graz by maintaining the extensive activities of waste consulting.

Reference to Agenda 21

**Documents**

Brochures, information sheets, copies of transparencies, press articles
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Wirtschaftshof 0316/29 56 25

Contents and Aims
Pilot project for the preparation of the separated collection of vegetable parts of the waste (bio-waste collection) intended in the Waste Management Concept.

Targets: Discovering:
- Quantity - Biogenic / Residual Waste
- Quality of bio-waste and compost soil
- User friendliness of certain systems

Implementation:
Model experiments in 3 project areas by means of separated collection of organic kitchen and garden waste with a subsequent processing in a supervised rotting method (stack composting).

Quality Inspection:
Accompanying chemical, physical and plant physiological examination made in a Diploma Thesis written by Franz Sauseng at the Institute for Plant Physiology, Department for Ecology and Nature Protection under the supervision of Univ. Prof. Dr. Franz Wolkinger.

Further Supporting Measures Taken:
- Building an experimental garden
- Organization of a compost inquiry
- Compost parties
- Public relations

Present Situation and Future Perspectives
After the model experiments made within the project, the compost barrel was introduced all over Graz.

Reference to Agenda 21
21

Documents
Copies of transparencies, newspaper articles
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Wirtschaftshof 0316/29 56 25

Project Title
Mobile Chopping Service Graz

Contents and Aims
As support for the decentral compost preparation, a Chopping Service was installed in cooperation with the Association BAN.

Aims:
• Chopping trees and bushes
• Treating these materials in single and common compost preparation
• Damming up the incineration of these materials
• Supply with mulch materials
• Reduction or avoidance of waste

Implementation:
A worker goes by tractor to directly take chopping equipment to the respective customer and to treat the supplied materials at the site. Then the chopped material will be available for individual further processing (structure material for compost preparation, mulch material), and no disposal will be necessary.
Present Situation and Future Perspectives
In the meantime, the Mobile Chopping Service has become established. Due to flanking measures for the decentral compost preparation (public relations, compost premium) and new legal settings (ban of incineration), the demand has increased so much that an extension and restructuring have become necessary in the meantime.
By now, the Mobile Chopping Service, which is offered by a non-profit Association, the ÖKO SERVICE GmbH with five choppers of various sizes, has become a fixed part of Waste Management in Graz. Due to the high demand, a CHOPPING EXCHANGE has been installed in addition to the Chopping Service. In this exchange, excess chopping material is made available by the customers to the operators of decentral compost plants who need this material as structure or covering material.

In combination with Compost Consulting, this large service offer makes it possible for the garden owners in Graz to process their tree and bush chops in an ecologically useful way.
Besides these services, the ÖKO SERVICE GmbH offers various other garden cultivation work. This has created 15 jobs.
A further extension of the services offered in waste management and ecology is being prepared.

Reference to Agenda 21

Documents
Copies of transparencies, tables, newspaper cuttings
Women

Agenda 21

24
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**Institution**
Magistrat Graz, Amt für Jugend und Familie,
Ref. für all. Frauenangelegenheiten,
Amtshaus Schmiedgasee 26, A-8010 Graz

**Contact**
Dr. Vasiliki Argyropoulos, 872-3186 (Tel/Fax)
Ursula Zelzer, 872-3185
Anita Schönberger, 872-3185

**Project Title**
Department for Women’s Affairs - Graz

**Contents and Aims**

a) Department for General Women’s Affairs; independent Department that is organizationally subordinate to the Office for Youth and Family

b) Activities and main functions:
- Public relations relating to women’s problems
- Execution and support of studies of the situation and problems of the women living in the city
- Organization of events for women in Graz
- Contacting office for women and women’s groups who want to commit themselves in areas relevant to women
- Cooperation with organizations relevant to women’s issues
- Granting subsidies and checking the use of subsidies for women’s projects
- Service office for women’s affairs at principal decisions of the City of Graz
- Cooperation with Departments for Women’s Af-
- fairs of other territorial authorities
- Dealing with concerns and complaints relating to the elimination of any kind of discrimination against women

c) Kinds of Presentation: brochures, folders, public events, working groups with experts, video film (relating to urban development)
Present Situation and Future Perspectives

a) We would, in particular, like to hint at this year’s Congress (June 20th - 21st, 1996) in the Shopping Center Steirerhof Graz to the Topic „Gain ground - Establish yourself“ (Women’s universes and their approach to the municipal area) (see Enclosure)

b) Continuing the activities; Priorities: work, health, foreign women, urban planning and development, European issues (also on the occasion of the Elections for the European Parliament on October 10th, 1996), Year of the Fathers, Companies respecting family’s needs, etc. - always in connection with women!

Reference to Agenda 21

Documents

Information material
Progress Report 1995
List of Activities 1996
Institution
Magistrat Graz
Mag. Abt. 6 - Amt für Jugend und Familie
Frauenbeauftragte und Frauenberatung
der Stadt Graz, Amtshaus, 3. Stock
8010 Graz
Contact
Barbara Kasper 0316/872-3009

Project Title
Women’s Advice Centre in Graz

Contents and Aims
The Office of the Women’s Representative was established about 10 years ago. Installed by the City of Graz, the Women’s Representative supplements the Women’s Affairs Office and the other official municipal institutions. The Women’s Representative is not subject to instructions, which means that she is absolutely free in her decisions and opinions. This freedom gives her a greater scope for action than the other municipal officers, thus enabling her to exercise a monitoring function. When establishing the Office of the Women’s Representative, the City Council deliberately decided that the Women’s Representative should not be subject to instructions so as to ensure total independence.

The Women’s Representative is a spokeswoman of the female population who can function as a mediator between the various municipal and other institutions. The task assigned to her consists of representing the interests of the female population in the public, drawing attention and trying to afford relief, in co-operation with others, to the various kinds of grievances encountered by the women of the city. She responds to political events and/or uses individual cases as a vehicle to hoist women’s problems onto the level of political debate.
Presents Situation and Future Perspectives

The Women’s Representative has a team of female advisers at her disposal who are hired by the hour and can offer concrete advice to women in any situation. The range of services offered by the Office of the Women’s Representative comprises, among other things, a legal advice centre for women that can, in special cases, even provide practical legal aid for female clients, a psychological advice facility, an advice facility for handicapped women and organisational support for women’s groups or initiatives. All these services are provided free of cost, the absolute anonymity of the clients of course being fully guaranteed.

An important task of the Women’s Representative is the creation of a network to interconnect the various women’s groups. The Women’s Council of Graz comprises 50 women’s groups of Graz, i.e. women’s organisations of the political parties, the trade unions, the various associations and churches, as well as independent women’s projects such as women’s advice centres, initiatives for unemployed women, anti-violence associations, etc. The agendas of the sessions of the Women’s Council feature all kinds of problems encountered by the members of the Council in their daily work with and for the women of the city. The Council tries to bring these problems to the notice of the public, contacts politicians and proposes improvements. The large number of participating groups and the great variety of different activities render the Women’s Council a highly significant institution.

If and when the need arises, the Office of the Women’s Representative publishes informational literature, the content of which may be of a political nature or of mere service character. All seminars and workshops are recorded on video.
The Office of the Women’s Representative was received by the female population with great interest and has remained an enormously appreciated institution ever since. The services of the advice centre are appreciated by large numbers of women, and the scope of activity of the Women’s Representative keeps changing and expanding, so that the amount of work to be done would definitely justify the allocation of additional personnel resources and more office space.

Presently, the Women’s Representative is planning to publish a magazine for all women’s groups of the city to disseminate the opinions and needs of the female population more efficiently. Another focus of the future efforts of the Women’s Representative will be employment and discrimination in respect of employment and occupation as well as the social security situation of older women.

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24
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Institution
Magistrat Graz, Gesundheitsamt, Amtshaus, 2. Stock, A-8010 Graz
Magistrat Graz; Stadtschulamt, Wielandgasse 7, A-8010 Graz

Contact
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(Dept. 6 of the Municipal Authorities, Medical Service)
Peter Baumhackl/Office City Councillor
Tatjana Kaltenbeck . 872-2072

Project Title
Health Studio in the School Project Atlas

Contents and Aims
Project oriented teaching is increasingly becoming important in the daily school life, teaching projects offering pupils and teachers an excellent opportunity to implement the holistic action oriented learning and the interlinked thinking that do not only make understanding correlations, „learning to live“, realistic but also exciting and thus revive teaching.

In this sense, the Municipal Supervisory School Authority („Stadtschulamt“) has created a School Project Atlas („Schulprojektatlas“) with 68 possible topics - with contents, lecturers, contacting persons for working material, supporting institutions - that is to serve as working aid for teachers. One priority in the sense of early awareness training is the Subject Matter Health: In cooperation with the Public Health Office („Gesundheitsamt“), the Municipal Supervisory School Authority and the Office for Youth and Family of the City of Graz, a special section, the „Health Studio“ („Gesundheitsstudio“) has been created for the School Project Atlas. The „Health Studio“ offers support for the following six project teaching subjects relating to health:

• Make your healthy snack yourself: interesting facts and practical hints relating to the snack (from the 1st form)
• Light cooking - no problem: Healthy nutrition for overweight children (for children attending day nurseries („Hort“) and pupils attending secondary modern school („Hauptschule“))
• Healthy food - selected correctly: What is particularly important when selecting food (from the 5th form)
• AIDS concerns us all: AIDS Prevention in combination with sexual education (from the 6th form)
• Alcohol - a drug? Consumption and abuse of alcohol (from the 6th form)
• No smoke is ok: Nicotine prevention (from the 7th form)

Way of Presentation
School Project Atlases were made available to all primary and secondary modern schools („Volksschulen“, „Hauptschulen“), the General Special Schools („Allgemeine Sonderschulen“) and the Polytechnics („Polytechnische Lehrgänge“). If necessary, the corresponding documents can be requested from the contacting persons mentioned in the Project Atlas.

Present Situation and Future Perspectives
Due to the big demand, we have already had to print the School Project Atlas in a second edition. For the following year, the erection of a School Project Center is planned. In this center, continuing documents for teaching projects - also those of the Health Studio - are made available.

Reference to Agenda 21
Documents
Section „Health Studio“ from the School Project Atlas
Children & Adolescents

Institution
Magistrat Graz, Stadtschulamt,
Wielandgasse 7, A-8010 Graz
Magistrat Graz, Amt für Jugend und Familie,
Amtshaus, 3.Stock, A-8010 Graz

Contact
City Councillor Tatjana Kaltenbeck
872-2070

SR Dr. Herbert Just
(Head of the Municipal Supervisory School Authority)
8052-821

Project Title
Decoration of school yards with children

Contents and Aims
Except for the school hours, school yards will, in most cases, be seen as „dead“ spaces - even though they would, in many quarters, be the only public areas that might be used as meeting, communication, living, adventure and leisure centers by children and adjoining owners alike. However, just „opening“ the yards used in the breaks is not enough; it is a question of scrutinizing the attractiveness of the school yards and of examining the extent to which they are playable. And who would be better qualified to do this than those young „experts“ that are to primarily use the school yards? For this reason, the Municipal Supervisory School Authority has, in cooperation with the Office for Youth and Family of the City of Graz, started a new model for decorating school yards: By means of children’s planning groups, project teaching and information of parents and adjoining owners resp., children, pupils, teachers and parents are not only incorporated into decorating the school yards but they are - of course with municipal support - responsible for both the planning and the implementation.

The model project was started in Autumn 1995 in the „Volksschule and NMS Straßgang“: Children’s planning groups - supported by the Municipal Consulting Agency for Children’s and Adolescents Initiatives as well as employees of the Children’s Representative - also intensively dealt with the Topic School Yard in teaching projects, and at several evening events, the Headmasters, teachers and parents were incorporated into the planning activities. The implementation saw a close cooperation between school, parents and City of Graz just as well. Eventually this cooperation was reflected in financing: The planning expenses were borne by the Youth Office, the transformation measures
were financed by the Parents’ Associations, the Municipal Supervisory School Authority and the District Council Straßgang. The parents, for their part, participated actively both financially and by helping in the implementation. Municipal support was also given by the Public Gardens Department („Stadtgartenamt“) and the „Wirtschaftshof Graz“.

**Present Situation and Future Perspectives**

The new Adventure School Yard Straßgang, (among other things with an arena for discussions, a pergola with benches and tables, a circle made up of half trunks and a barbecue spot, a tree house, a jumping pit, a sandpit, plants, garden tables, benches, garden huts, a recess, marking for games on the bituminized school yard and a labyrinth) was opened at the beginning of July 1996. Quite a few other schools (Headmasters and Parents’ Associations) have already registered for this new type of decorating the school yards, some of the schools wanting to open the „new“ school yards also as adventure centers outside the school hours.

In the school year 1996 / 97, such planning groups will probably be installed in the following schools of Graz with the support of the Municipal Supervisory School Authority VS Wieland, ASO am Damm, VS Brockmann, NMS Kepler, NMS St. Andrä and VS Triester; due to the big demand, this program will also be continued in the following years.

**Way of Presentation**

An extensive Final Report „Decorating the School Yard Straßgang“ is available.

---

**Reference to Agenda 21**

25
Institution
Magistrat Graz, Amt für Umweltschutz,
Referat für Energie und Klima,
Griesgasse 11, A-8020 Graz.

Contact
Dipl. Ing. Karl Heinz Lesch,
tel.: +43 316 972 658-16, fax: +43 316 872-4309,
email: afumwelt@mbox.tu-graz.ac.at

Project Title
Schools Energy Projects

Content and Aims
Graz Department of Environmental Protection,
Section of Energy and Climate, has taken many
approaches to motivating teachers at schools in
Graz to carry out energy projects (cf. description
Enerwie? Enerwas?). A number of notable schools
projects outlined below have evolved from these
activities:

• "Painting competition on the Day of the Sun";
Schools in Graz created approx. 60 big flags fo-
cused on the Day of the Sun; for two weeks, these
flags decorated the inner-city of Graz, drawing
attention to environmentally friendly utilisation
of solar energy.

• "Solar power facility for school kitchen";
Welling secondary modern school built its own solar
power facility for heating hot water for the school
kitchen.

• "No food without sun (Ceos)"; under the super-
vision of teacher Mag. Willibald Gallì, pupils from
Lichtenfels grammar school elaborated a number
of mobile devices for utilising solar power for pre-
paring food and heating water.

• "Hot water for the gym at the B(R)G Carneri
school"; in collaboration with their teacher Ro-
land Egger, pupils from the BRG Carneri have
built a 36 m² solar power facility for heating their
shower water.

• "Flags in support of the Nordlicht campaign";
pupils from the B(R)G Carneri have created 10
flags supporting the Nordlicht campaign (see de-
scription); these flags were displayed at several
events in support of this campaign, arousing a great
deal of attention.

• "Project week sustainable development "; a
project week on the subject of sustainable devel-
opment was held at the BRG Dreihackengasse.
After indicating the problems on day one, pupils
had one week’s time to elaborate solutions in actual projects along the lines of sustainable development.

**Present situation and Future Perspectives**
Support of energy projects at schools in Graz to be continued.

**Reference to Agenda 21**
4, 7, 8, 9, 25, 36, 34

**Documents**
Photos of the Day of the Sun
Invitation to the presentation of the CIOS project
Photos of the Nordlicht flag campaign
**Institution**
Magistrat Graz, Amt für Umweltschutz,
Referat für Energie und Klima,
Griesgasse 11, A-8020 Graz

**Contact**
Dipl. Ing. Karl Heinz Lesch,
tel.: +43 316 972 658-16, fax: +43 316 872-4309,
email: afumwelt@mbox.tu-graz.ac.at

**Project Title**

**Content and Aims**
Together with Mr. Gottfried Meier (teacher at Imst grammar school, Tyrol) and Mr. Jürgen Suscheck-Berger from the interuniversity research centre of technology, work and culture in Graz, the city of Graz organised the teacher’s further training seminar from 21 - 23.10.1993. The aim of this seminar was both to motivate teachers to carry out schools projects on energy and also to provide them with the necessary tools for doing so. The aim of this project was to elaborate not only the major focal points of the Municipal Energy Concept Graz (KEK), but also the characteristics of project teaching, the individual project modules and the project schedule on the basis of a concrete example. 20 teachers from Graz and the surrounding area took the opportunity of increasing their knowledge and motivating themselves in this way. On the basis of this starting point, a number of interesting objects developed at schools in Graz which were primarily focused on the question of solar energy (see description of schools projects). For the future, it is planned to establish a Graz-Styria energy network documenting the schools projects and supporting pupils and teachers in carrying out energy projects.

**Reference to Agenda 21**
4, 7, 8, 9, 25, 36, 40.

**Documents**
Institution
Magistrat Graz, Amt für Umweltschutz, Referat für Energie und Klima, Griesgasse 11, A-8020 Graz.

Contact
Dipl. Ing. Karl Heinz Lesch, tel.: +43 316 972 658-16, fax: +43 316 872-4309, email: afumwelt@mbox.tu-graz.ac.at

Project Title
Municipal Energy Concept - Education Initiative (KEK-BI)

Content and Aims
The KEK-BI is an attempt to involve the population of Graz in implementing its objectives. In order to find a starting point that can be achieved by the citizens of Graz with regard to the subject of “energy”, school pupils were selected as multipliers. In the KEK-BI, schools projects are carried out on the topic of “energy and the environment” which are to be closely related to the Municipal Energy Concept. In this way, it is possible to publicise ideas and the KEK to the wider public through schools and pupils as multipliers. Furthermore, the aim is to obtain feedback from older pupils for the departments and individuals in charge of implementing the Municipal Energy Concept.

Present situation and Future Perspectives
To date, several energy projects have been carried out at schools in Graz. In future, an important area will be further training of the teaching staff involved and creation of an energy network centre aimed at linking up and motivating schools in Graz.

Reference to Agenda 21
4, 7, 8, 9, 25, 36, 40.

Documents
Enerwie? Enerwas? Documentation of a further training seminar for teachers from 21 - 23 October 1993, Gottfried Meier, Jürgen Suscheck-Berg er, series of papers of the interuniversity research centre of technology, work and culture (IFZ), issue 23, Graz 1994 (Project No 107, File 25)
Children & Adolescents

Institution
Amt für Umweltschutz,
Referat für betriebliche Umweltvorsorge,
Griesgasse 11, A-8020 Graz

Contact
Dipl. Ing. Dr. Barbara Moshammer,
+43 316 972710-12

Project Title
Do Your Job Eco - Ökoprofit (Eco-Profit) - Graz for Vocational Schools

Aims and Contents
Future is a challenge for us. In the sense of a responsible management, a way to look for the causes of environmental problems at the source and to produce less waste and fewer emissions by an economical handling of raw and working materials has to be searched.

Linking the ÖKOPROFIT Idea with the school created a broad basis for the implementation of the ideas of preventive environmental protection within a Company and supports the possibilities to jointly and efficiently solve problems.

• Treading new paths in cooperation between Companies, Vocational Schools, the Municipality and Research Institutions
• Training in the careful handling of materials and energy
• Detecting ecological weaknesses and making improvements

• Detecting and showing ways to cooperate
• Propagating ÖKOPROFIT Ideas in the Company
Present Situation and Future Perspectives

The Vocational School 7 in Graz St. Peter was very interested in the ÖKOPROFIT Project for Vocational Schools and was ready to implement it together with the students of the Graphic and Hairdressers’ Trades in 1995.

The topics of the program are adjusted to the contents of the workshops in the ÖKOPROFIT Dissemination Program and adapted to the vocations. The Vocational School Students are to transport ideas for preventive environmental protection into their Companies.

In future - and this is also confirmed by various experience made with other schools and teachers - people are almost everywhere interested in continuing this project in various Vocational Schools or to offer contents of this kind in the further training of teachers.

Reference to Agenda 21

4,25,36.

Documents

Manual „Do Your Job - Eco!“
Publication “lessons learnt an how to manager a locally based pollution prevention project”
Folder
Institution
Magistrat Graz, Amt für Umweltschutz, Referat für Energie und Klima, Griesgasse 11, A-8020 Graz.

Contact
Dieter Zeiringer, +43 316 972 658-15, fax: +43 316 872-4309, email: afumwelt@mbox.tu-graz.ac.at

Project Title
Renovating schools energy systems at state schools in Graz by means of contracting

Content and Aims
Renovating state schools in Graz is funded by third parties. Planning, execution and financing of school renovations were awarded to leasing firms. The necessary manpower required for renovation work was thus contracted out and financing is split up over three years for the city of Graz.

Section 1: Immorent/Raiffeisenleasing
Schools: Neuhart primary school (160 pupils), Puntigam primary/secondary (230 pupils), Münzgrabenstraße primary (220 pupils), Keplerastraße primary/secondaries (390 pupils), Fröbel primary/secondaries (290 pupils), Elisabethstraße primary/secondary (290 pupils), Brockmannagasse primary (210 pupils), Andritz primary (180 pupils), Triestersiedlung primary (260 pupils), Wetzelesdor primary (260 pupils).

Renewal of energy system:
1. Full thermal insulation of 5 objects
2. Insulation of the top storey ceiling(s) to the outside air at all schools
3. Window renewal and renovation (new wooden windows with thermal insulation glazing k=1.3 W/m²K)
4. Renewal of all heating systems with individual room regulation
5. Renewal of lighting systems in 9 schools, installation of electrical chokes in all systems.

Total volume of investment: around 12,83 mill. ECU net
of which investments in energy-saving measures: around 1,28 mill. ECU net
Section 2: Gala/Hypo Bauträger Ges.m.b.H.

Schools: Andritz secondary, Bruckner primary/secondary, Hirtenschule grammar, Baiern primary, Mariagrün primary, Lagergasse primary, Dr. Renner secondary, Algersdorf primary/secondary, Albert Schweitzer-Grieskaischule primary/secondary, Wieland primary

Renewal of energy system:
1. Full thermal insulation of Bruckner school
2. Insulation of the top storey ceiling(s) to the outside air at all schools
3. Window renewal and renovation
4. Renewal of heating systems
5. Renewal of lighting systems, installation of electrical chokes in all systems.

Total investment: around 14,57 mill. ECU net, of which investments in energy-saving measures 679,245,3 ECU.

Present situation and Future Perspectives

The first section has been completed, the second is at the stage of completion. In the near future it is planned to translate this model to other areas such as kindergartens and social facilities.

Reference to Agenda 21
4, 7, 9, 10, 25, 33.

Documents
Brochures on school renovation.
KEL Report No 3
In order to be able to give children going to nursery school an understanding of the pressing Topics Waste Avoidance, Separation and Recycling, the „Wirtschaftshof“ has, in cooperation with the Youth Office („Jugendamt“), entrusted artists with creating a musical play.

Aims:
Making children aware of waste and environmental problems in a playful way

Implementation:
A musical clown („Hokus Pokus Musikus“, Franz Wezelsberger) devised a story about „Häschen Hoppelbein“.

This musical play was performed within the Project „Ideas instead of Rubbish“ („Einfälle statt Abfälle“) in all municipal nursery schools together with children and nursery school teachers.

„Häschen Hoppelbein“ is a musical play devised to give children an understanding of the waste problems without a raised forefinger and to animate them to make a contribution according to their possibilities.

The nursery schools were provided with lyrics, music and a tape for the further use.

Reference to Agenda 21

Documents
Contents of the story, photos; newspaper articles
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Wirtschaftshof 0316/29 56 25

Project Title
„Einfälle statt Abfälle“ („Ideas instead of Rubbish“)

Contents and Aims
This project was made in municipal nursery schools, day nurseries and homes.

Aims:
• Make children feel and understand the Waste Topic
• Sensitivize nursery school teachers for the topic
• Make children aware of problems as early as in nursery school
• Practise the avoidance and separation of waste with children

Implementation:
At information events, nursery school teachers and educators in day nurseries and homes were animated to participating.
Almost all municipal institutions taking care of children participated on a voluntary basis.

The topic was made understandable to the children by a play that was specially designed for this.
After being consulted by the Waste Consulting Agency, the nursery school teachers were in the position to pedagogically treat the topic and incorporate it into their work with the children. The awareness, sensitivity and perception necessary were promoted by incorporating waste conscious behavior, separating waste together, making a compost heap, consolidating knowledge by reading books relating to environmental issues, songs and role plays. At parent-teacher meetings, the main persons of reference were informed and motivated to support the children.
Present Situation and Future Perspectives

The project led to really concrete action in most institutions taking care of children. Avoiding waste at the common purchase and in the snack break, separating waste and partly preparing compost have become a fixed part of common action.

The experience gained in this project has shown that environmental education can be successfully implemented if committed educators, parents and, above all, children capable of enthusiasm are correspondingly informed, motivated and consulted.

Reference to Agenda 21

25, 21

Documents

Photo; newspaper articles
In 1985, the collection of used batteries was started in the schools. The schools were awarded prizes for their activities. It was only later that the batteries were collected by the collection of hazardous material or trade and commerce.
In the school year 1994 / 1995, a competition for waste separation was made in all compulsory schools in Graz. The best school was awarded a prize and got a system for waste separation.

Present Situation and Future Perspectives

The work in schools is a considerable contribution to measures forming the awareness of environmentally beneficial behavior. Young people are receptive to changes whereas adults often have problems giving up habits, above all if this is inconvenient.

As our children grow up in an affluent society, it is important to familiarize them with behavior avoiding waste. Exemplary action encourages more to imitation than theoretical information. This project cannot be regarded as being completed so soon. Many schools could not be attended to yet, new children come into the schools attended to.

Reference to Agenda 21

4, 25, 36

Documents

Newspaper articles, certificates, photos
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Müllberatungsstelle 0316/295625

Project Title
Neue Mittelschule Straßgang - Waste contains valuable substances.

Aims and Contents
Beginning: October 1995
The school project aimed at giving background information on the waste issue to the children, at elaborating possibilities to avoid waste with them and at jointly practising waste separation.
In cooperation with the Waste Consulting Agency, the Headmaster assumed the organization of the project.
All teachers were informed in a conference and invited to participate in this project. Various impulses and materials were made available, (e. g. a photo exhibition on the recycling of packing materials). In project days, possibilities to avoid waste were elaborated together with the children, and the Topic Waste was incorporated into the lessons relating to various subjects.
For the first time, sponsors in the private sector could be found. These sponsors provided the school with money for a system for separating waste. An official handing-over completed the project.

Present Situation and Future Perspectives
The project is regarded as being completed, waste separation works well because pupils and teachers feel responsible.
The project can be extended by an own compost preparation in the school garden.

Reference to Agenda 21
4, 21, 25, 36

Documents
Press report
**Institution**
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

**Project Title**
Waste Project BG/BRG Oeversee

**Contact**
Müllberatungstelle 0316/295625

**Aims and Contents**
Beginning: April 1994
At the beginning of the common project of the Waste Consulting Agency Graz and the Oeversee High School, all teachers were informed on the project.
Then an extensive inventory of the topic was taken in school:
a) Determining the ACTUAL state relating to waste separation and quantities in the classrooms, in the schoolyard, in the rest of the school building
b) Inquiring the information level, the personal attitude and readiness to separate waste of the pupils by means of a questionnaire.
c) Canteen: Review of the offer of goods / kind of packing, comment of the owner of the canteen to the avoidance and separation of waste.

**Present Situation and Future Perspectives**
This project has not been completed yet. For all rooms, separating containers have been purchased, and these containers have been arranged and labelled.
The school canteen could not yet be transformed because the negotiations with the owner of the canteen turned out to be difficult.
As closing date for the project, however, Autumn 1996 is realistic.

**Reference to Agenda 21**
4, 25, 36

**Documents**
Questionnaires
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Müllberatungsstelle 0316/295625

Project Title
Waste Project BG/BRG Korösi

Aims and Contents
Beginning: May 1995

During the biology lessons, an initiative with far-reaching consequences was born. A class wrote a letter to a buffet manager, in which he was requested to sell drinks in returnable packing.

The Headmaster was incorporated into the matter, experts from outside were invited (Environmental Coordinator of the City of Graz, Waste Consultants of the Waste Consulting Agency).

The pupils made an inventory and analysis of the situation of the waste behavior in school that had prevailed up to that time in 4 project groups:
1. Investigations into the avoidance of waste in the school canteen
2. Interviewing the owner of the canteen on the Topic „Avoiding Waste in the School Canteen“
3. Interviewing the teachers to the topic
4. Investigations into waste separation in school

The results were evaluated. Then the targets were jointly defined, and an organizational plan for the implementation was elaborated in a working group.

The questions as to what containers had to be put where, who had to empty them and who was responsible were dealt with.

In teachers’ conferences, all teachers were informed on the results, the project, settings for a successful implementation of the project and contents relating to waste management by the Waste Consulting Agency.
Present Situation and Future Perspectives

The project has been completed, all classrooms and other rooms are equipped with the required waste containers.

The buffet has been transformed to the use of drinks in returnable packing.

In the meantime, an extensive project report, which may support further schools, has been established.

Reference to Agenda 21

4, 25, 36

Documents

Invitation to the presentation, concept for the presentation in the teachers’ conference
<table>
<thead>
<tr>
<th><strong>Institut</strong></th>
<th><strong>Project Title</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Magistrat Graz</td>
<td>Müllodia - a Musical on „Müll“ - Waste</td>
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<tr>
<td>Wirtschaftshof</td>
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<tr>
<td>Sturzgasse 5-7</td>
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<tr>
<td>8010 Graz</td>
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</tr>
</tbody>
</table>

**Contact**

Müllberatungsstelle 0316/295625

**Aims and Contents**

The pupils of the „Musikhauptschule Ferdinan-
deum“ performed a Musical relating to the Topic „Environment and Waste“ in the „Grazer Or-pheum“.

The idea was born by Director Radkovics, Or-pheum.

In cooperation with the Waste Consulting Agen-
cy, the technical contents were elaborated.

After some months’ rehearsals and studies, there were 17 successful performances.

Müllodia was recorded on a record album.

**Present Situation and Future Perspectives**

The project has been completed.

**Reference to Agenda 21**

4, 25, 36

**Documents**

Announcing folder, press reports
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Müllberatungsstelle 0316/295625

Aims and Contents
Transformation of the school canteen
Beginning September 1990 with an information event organized by the Waste Consulting Agency for all classes.
Then the further steps were fixed in a planning stage.
-Implementation of the avoidance of waste in the school canteen
-Organization of waste separation in school
-Public relations, information and publicity for measures avoiding waste
This resulted in 25 project tasks, which were processed by groups of pupils.
The transformation from non returnable packing material to returnable packing material in the school canteen turned out to be the most important aim. The implementation of the project was jointly executed and completed by pupils, teachers, the owner of the canteen and the Waste Consulting Agency.

Present Situation and Future Perspectives
For the pupils, it is an essential educational process to get used to the idea that the use of packing material does not end by its being thrown away but that packing material has a value and is therefore collected and reused. The request to give back the deposit bottles sets limits to the easy throwing-away behavior.

Reference to Agenda 21
4, 25, 36

Documents
Folder
Children & Adolescents

Institution
Kinderbeautragter der Stadt Graz
Brockmannasse 43
8010 Graz

Contact
Hans Fraeulin  0316/835676  Fax DW 76
Rita Musenbichler

Contents and Aims
Freedom of speech and freedom of the press
Freedom of speech and freedom of the press are two key elements within the canon of fundamental rights. What use are all other human rights if you don’t have the right and possibility to disseminate them and to inform others about them?

Objectives
Modern children’s policy is aimed at letting children take part in public life. Children, too, should be allowed to have their own opinion - so says the UN convention on children rights. The important thing is that you can also disseminate your opinion. A modern children’s newspaper is thus a newspaper by kids for kids. The contribution of adults is restricted to moderation, service, organisation and help to self-help in creating a product of a professional calibre. Here, children can learn newspaper editing by doing, without any educational impetus - and have lot of fun in the process. Great stay is laid by not instrumentalising the kids for adult intentions, however noble such political intent may be. Basically, everything that interests affects children should be in a modern children’s newspaper.

Structures
Democratic forms of decision-making have also asserted themselves in the newspaper business, particularly with monthly papers and local mags, with the effect that children can assume a great degree of responsibility for designing the paper within a short time. In order to lend a professional touch to the appearance of the magazine, professionals provide their know-how, doing their best to avoid any “no dice” in their repertoire of arguments. Children have the chance to know all stages of newspaper production. They can decide on the forms of co-operation and work division them-
selves, as also the editorial statute. They can work on the paper on a regular or occasional basis. The project is not geared towards profit-making. The latest development is mobile editorial meetings with interested schools.

**Data**

- Published 5-6 times a year
- Editorial meetings Wednesday afternoon in the Ostbahnhof culture centre.
- * Format: A4 * size: 20 pages, 4-coloured cover, * copies: 10,000 * distribution: by children, mail distributor of schools office, available in schools, day homes, homes and at the university children’s clinic
- * Ad returns: approx. 4000/issue, *funds: 360,000 Office of Youth and Family Affairs (sales price of ECU 0.30 is declared for press law reasons).
Present Situation and Future Perspectives

So far, 15 issues have been published in a period of not quite 3 years. The title was selected and adopted by the children in a three-hour editorial meeting conducted by a management consultant. Distribution to the 4th form primary school and 1st-4th forms secondary school was soon sorted out. Several issues are out of print. Provocative topics regularly cause heated discussion and outspoken letters to the editor. The editor’s work is restricted to fending of occasional interventions by adults, politicians and overzealous teachers.

Reference to Agenda 21

Documents

2 Brochures

“Sometimes” and “Buntbuch”
Institution
Büro des Kinderbeauftragten
Brockmannngasse 43
8010 Graz

Contact
Dr. Christiane Hammer
0316/83 56 76 Fax DW 76

Project Title
Schoolyard Project - Designing and Opening Up Schoolyards

Contents and Aims
At the initiative of the office of the Commissioner for Children’s Affairs of the city of Graz, the town councillor for youth affairs Tatjana Kaltenbeck suggested at the primary and secondary school headmaster’s conference on June 3 and 10 designing schoolyards together with children and making them accessible also to non school-goers outside school hours, too. The city of Graz has pledged funds for such projects, the office of the Commissioner for Children’s Affairs is the contact address.

Present Situtation and Future Perspectives
The following steps are planned until autumn 1996:

a. Making contacts and inspection of the schoolyard:
As at this day, contacts were made with 6 primary schools, a general special school, two new grammar schools and two secondary schools.

First talks were combined with a visit to the schoolyards, various design aids were provided, subsidy and funding possibilities were discussed as also any legal questions. The discussion was centred around stressing the necessity of involving children in the design process from the outset. Leading to

b. Drawing up and sending out questionnaires:
with the aim of recording all requirements, wishes and ideas of the pupils. To be created before the school holidays if possible.

c. Organisation of a schoolyard tour:
To take place at the beginning of September, visiting finished, attractive schoolyards. The target group is interested pupils, teacher and parents.

d. Elaboration of a list of priorities for schoolyards: particularly well-suited for non-school use owing to their size and make-up, in connection with ascertaining the requirements of open spaces. Primarily, opening up the schoolyards should not, however, be made dependent upon requirements.

e. Holding parent/teacher conferences:
These could be held together with the school forums taking place at the beginning of the school year 1996/97.

Presentation of results of questionnaires:
Discussion of further procedure with regard to planning and implementation of design.
Decision as to opening up the schoolyards with preliminary "rules". Presentation of the schoolyard exhibition.

f. Making contacts necessary for carrying out design:
Contacts between schools, professional planners (architects, municipal advice centre for children’s initiatives) and authorities (education authorities, Department of Youth Affairs, Department of Municipal Parks and Gardens, Municipal Depot).

The task of the office of the Commissioner for Children’s Affairs is thus completed. Planning
proper will be performed together with schoolyard planners, actual design work should be carried out on the school’s own initiative with the support of teachers, parents and pupils.

Reference to Agenda 21

Documents:

Travenling exhibition, Brochure “Schoolyards”
Summary

- Energiewende - Klimaschutz - Graz (EKG) / Energy change-over - climate protection - Graz ........................................... 220
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Institution
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Project Title
Energiewende - Klimaschutz - Graz (EKG) /
Energy change-over - climate protection - Graz

Content and Aims
The Energy Change-Over - Climate Alliance Committee - founded in September 1993 - co-ordinates, accompanies and narrows down the climate alliance activities and unites organisations and associations in the environmental and development policy sectors with public administration and science.

The aims are the result of implementing the climate alliance which Graz also joined as early as 1990 as the first city in Austria.

The major focuses:
• Elaboration of a climate protection concept.
• CO2 reduction by 50% by the year 2010.
• Reduction of other greenhouses gases.
• Non-material and financial support of rain forest projects of the American Indian organisation FOIRN in the Brazilian Amazon basin.
• PR work.

Present situation and Future Perspectives
The Energy-Change-Over Committee advises political authorities in all issues of the climate alliance and decides on the financial assistance of rain forest projects.

Reference to Agenda 21
4, 9, 26, 27, 36, 38, 40
Project 122

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Project Title
Support of rain forest projects

Contents and Aims
When joining the International Climate Alliance, the Styrian Capital of Graz has also committed itself to support projects for the sustainable cultivation of the rain forest by the peoples living on the Amazone (representatives of the COICA). For this regular support, 7547.17 ECU are provided for in the current budget of the City of Graz.

Present Situation and Future Perspectives
The subsidies for the rain forest project are regularly transferred to the Institute for International Cooperation (IIC). In Austria the municipalities taking part in the Climate Alliance have agreed upon supporting projects in the area of the Alto Rio Negro in Brazil and upon entrusting the IIC with executing the project.

Reference to Agenda 21
2, 26

Documents
Newspaper articles
Agenda 21

Non-Governmental Organizations

Nicht-Regierungsorganisationen
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Public Participation in Planning a New Park................................. 225
**Institution**
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A-23 Amt für Umweltschutz  
Referat für Information und Dokumentation  
Griesgasse 11, 8010 Graz

**Contact**
Wolfgang Thiel  
872-4306

**Contents and Aims**
Continuity and carefully planned focuses are the basis of environmental work in Graz all year round. This applies above all to co-operations between the city of Graz and environmental protection and nature conservation organisations. Here the city is presented as a platform and mediator for relevant issues: Periodical (4 x p.a.) "Environmental Meets" are aimed at discussing and planning such focus projects often jointly presented to the public.

The permanent travelling exhibition Umweltaktiv or the periodical (quarterly) pupil and teacher information "a city worth living in" action are just two examples.

A great deal of willingness to co-operate is also shown by an annual environmental party at which the department of environmental affairs offers all environmental protection and nature conservation organisations the opportunity of providing information.

Around 80 such organisations and institutions accept this invitation and have taken ”energy” as their main subject for the environmental party to take place on 5.10.1996.

Last year the party was combined with the 1st Graz environmental film days in collaboration with GLOBAL 2000.

**Reference to Agenda 21**
27

**Documents**
- Who is Who (Handout, adress material)
- Newspaper articles
- Books:" Wassermärchen", "Luftmärchen", "Lärmgeistlein"
Institution
Magistrat Graz,
Büro für Bürgerinitiativen,
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Contact
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Project Title
Public Participation in Planning a New Park

Contents and Aims
Role of Important Social Groups (items 25 to 28) are taken into account. Graz is able to look back on more than 20 years of experience with citizen’s initiatives, taking a decisive step in installing a Citizen’s Initiative Office as early as 1974; the task of this office is to mediate between citizens and local planning authorities.

The aim was to offer various groups a platform for dialogue within processes of conflict resolution, a platform for presenting and discussing different opinions.

Within the "Space for People" project, work is currently being done on making the Gries district more attractive and upgrading it regards urban development.

Parallel to the historically evolved building structure, the project area also contains a characteristics social structure with inherent fields of contacts and relations. The drop in population figures that has been ongoing now for many years and the influx of socially weak groups and foreign immigrants is jeopardising these historical social structures.

Public participation as an identity promoting measure is aimed to have a stabilising influence and create a new form of self-awareness.

The "Öoverseepark" conforms to a number of objectives of "Local Agenda 21". Part I: both social and economic factors (items 5 and 6), and Part III: Consolidating the
Present Situation and Future Perspectives
At the heart of this area the local authorities have purchased a 20,000 m² piece of land with the intention of erecting a park. Planning and implementation are to be by way of the public planning process, striving to achieve the following goals
• integration
• participation
• cost-awareness
so as to fulfil the requirements and demands of the population in as balanced a way as possible.

After informing the population in-depth (press release, invitations to the public to take part in two public meetings), a planning committee comprising 20 representatives of all future park users was installed.
This planning committee is currently working on elaborating a draft plan which is to be presented to the public by autumn this year and which is to serve as the basis of planning the new Oeverseepark.

Reference to Agenda 21
6,7,25,26,27,28
Documents
• Oeverseepark: Invitation for working in the planning committee
• Oeverseepark: Invitation to the population-meeting
• Newspaper articles
• Oeverseepark: Model for an integrated Park-Planning / - Working Schedule
Summary
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**Project Title**
Local Agenda 21 „Issue Related Environmental Program Graz - Ökostadt 2000“

**Aims and Contents**
In the Agenda 21 voted by the UN Conference for Environment and Development (UNCED) in Rio de Janeiro in 1992, cities, municipalities and other municipal institutions are requested to prepare a „Local Agenda 21“ by the year 1996. The Issue Related Environmental Program Graz „Ökostadt („Ecological City“) 2000“ corresponds to such a Local Agenda 21. On more than one thousand pages, it does not only contain analyses of the situation and guidelines relating to environmental policy for Graz but also principles for a sustainable city development by the turn of the millennium.

In July 1995, the Municipal Council voted the short version of this Issue Related Environmental Program „Ökostadt 2000“, which had been revised and updated in 1994.

The Issue Related Environmental Program is to open new perspectives to municipal environmen-
Present Situation and Future Perspectives
The concrete scope for manoeuvre was summarized in nine action programs, which are divided according to the most important issues relevant for environment.

<table>
<thead>
<tr>
<th>ACTION PROGRAMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Environmental protection in private households</td>
</tr>
<tr>
<td>☐ Environmental protection in public institutions</td>
</tr>
<tr>
<td>☐ Environmental protection in companies</td>
</tr>
<tr>
<td>☐ Ecological agriculture</td>
</tr>
<tr>
<td>☐ Water and water bodies, development of natural areas and meadows</td>
</tr>
<tr>
<td>☐ Abandoned polluted areas</td>
</tr>
<tr>
<td>☐ Traffic and environment</td>
</tr>
<tr>
<td>☐ Noise reduction and avoidance</td>
</tr>
<tr>
<td>☐ Protection of the earth atmosphere</td>
</tr>
</tbody>
</table>

Each program contains a series of proposals for measures for achieving the target of an „Ökostadt 2000“.

In order to allow to quantitatively review extent to which the targets are achieved, so-called Parameters for Lastingness were defined as milestones for the most important issues relating to environmental policy. Though the success and, above all, the quality of the environmental policy of Graz cannot be reduced to some quantifiable parame-
ters, this set of numerical values does give important hints on the degree of „economic sustainability in Graz“. The following parameters are well suited for assessing the success and are determined in regular intervals even now.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Parameter for Lastingness</th>
<th>Target by 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air</td>
<td>Emission of SO₂, CO and dust</td>
<td>-30%</td>
</tr>
<tr>
<td></td>
<td>Emission of NOₓ, VOC</td>
<td>-60%</td>
</tr>
<tr>
<td>Noise</td>
<td>Length of streets and roads with a noise nuisance over 65 dB(A)</td>
<td>-10%</td>
</tr>
<tr>
<td>Energy and Climate</td>
<td>Level of the CO₂ Emissions</td>
<td>-20%</td>
</tr>
<tr>
<td></td>
<td>Level of power consumption</td>
<td>-7%</td>
</tr>
<tr>
<td></td>
<td>Share of regenerative energy carriers</td>
<td>25%</td>
</tr>
<tr>
<td>Traffic</td>
<td>Modal Split</td>
<td>s. p. 10</td>
</tr>
<tr>
<td></td>
<td>Distance covered by MIV Drivers</td>
<td>-2%</td>
</tr>
<tr>
<td></td>
<td>Number of kilometers covered by the buses and streetcars</td>
<td>+10%</td>
</tr>
<tr>
<td>Waste</td>
<td>Registration of motor vehicles</td>
<td>Balance</td>
</tr>
<tr>
<td></td>
<td>Total waste in the City</td>
<td>-13%</td>
</tr>
<tr>
<td></td>
<td>Tailings in the City</td>
<td>-30%</td>
</tr>
<tr>
<td></td>
<td>Trade / Industry (non recyclable waste, use of raw and auxiliary materials)</td>
<td>-30%</td>
</tr>
<tr>
<td></td>
<td>Hazardous waste</td>
<td>-50%</td>
</tr>
<tr>
<td>Water</td>
<td>Delivered quantity of drinking water</td>
<td>-5%</td>
</tr>
<tr>
<td></td>
<td>Quality class of water bodies (Mur)</td>
<td>2</td>
</tr>
<tr>
<td>Ground</td>
<td>Sealed area</td>
<td>Balance</td>
</tr>
<tr>
<td>Natural Areas and Meadows</td>
<td>Protected countryside, additional</td>
<td>50 ha</td>
</tr>
<tr>
<td></td>
<td>Nature preserves, additional</td>
<td>30 ha</td>
</tr>
<tr>
<td></td>
<td>Natural monuments, additional</td>
<td>7</td>
</tr>
</tbody>
</table>
The implementation of the Issue Related Environmental Program Graz „Ökostadt 2000“ is not to be done within the Municipal Authorities but with the participation of experts, environmental groups, citizens’ initiatives and citizens that are interested. This approach encouraging participation is to guarantee support that is as large as possible. An independent Commission - the „Öko-Team“ (Ecological Team) of Graz, which is directed by the Environmental Office of Graz and representatives of Departments of the Municipal Authorities concerned as well as by representatives of the Universities of Graz, the Styrian Government and representatives of environmental organizations of Graz has to appraise and evaluate the progress of the activities taken to achieve the targets defined by the Issue Related Environmental Program „Ökostadt 2000“ in triennial intervals after the evaluation documents have been prepared. If targets are not achieved, the reasons for missing the targets have to be stated, and the planning for the next evaluation date has to be submitted.

Reference to Agenda 21

28

Documents

• Short Version Issue Related Environmental Program Graz „Ökostadt 2000“

• Publication in "Aktion Lebenswerte Stadt" (D. List, 1995)

• Newspaper articles
Summary

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Energie”............................................. 242

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Local Agenda 21 - Ökostadt 2000 Graz - Local
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EDP supported Environmental Management
and Environmental Information Systems .... 249

Subsidies for environmental protection in
Companies ........................................... 250
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Contents and Aims
On the basis of the local council decision of 9.5.1996, the city of Graz has approved an economic model, a telecommunications model and a tourism model. During the entire elaboration work, great attention was paid to achieving a holistic conception and to networking many individuals, organisations, institutions and also to linking numerous subjects such as science and research, culture, ecology etc.

In drawing up the economic model, special attention was given to creating a wide sponsor basis for implementation the economic model. This requires a longer process duration of around 1 « years; in addition this makes it possible to elaborate a strategy of implementation and concrete projects, measures and economic promotion guidelines at the same time as creating the model itself.

The economic model formulated an objective - Graz hub:

Graz is developing to become a hub of activity between the north-west of Europe and the regions to the south-east of Europe. Graz sees itself as being a site of meeting and co-operation for business, science, politics and culture.

Graz' location and the visibility of Graz as a central area are to be underlined by means of three qualities:

The will to carry out innovation
Communication willingness
The capability of integration

The aim is to demonstrate the competence of Graz in six specific areas, the two most important be-
"Graz: a centre of environmentally oriented technologies” and "Graz: a city of dialogue and communication". By example of these two fields of competence, the aim is to illustrate projects and measures that have already been initiated:

Field of Competence - "Graz: a centre of environmentally oriented technologies"

The Business Park South-East was erected in the south-east of the city in the form of a modern technology park. This technology park is focused on two areas: innovation-oriented eco-high-tech companies and firms in the telecommunications sector. As early as the end of May the first sod was turned for a large company complex. This building complex will house an information centre for environmentally compatible production, an energy agency, a corporate consultancy agency for eco-high-tech firms, an environmental engineering company and three companies from the telecommunications sector. In August 1996, construction is to be commenced on another company complex for five eco-high-tech companies in the engineering and production sectors.

The field of competence Graz: a city of dialogue and communication has seen the creation of a number of projects and initiatives. Specific mention should be made here of the virtual company presentation platform and the virtual project exchange and fair platform Tech-Place. Around 330 firms are included in this information system with around 100 companies, leading names in the central Graz region, and around 50 coming from the separate eco-high-tech sector and ecologically oriented production companies. This company information system is part of a city information system on the Internet - http://www.iic.wifi.at/graz/. At
the same time, the city of Graz has initiated preparatory work for an interactive, multimedia citizen’s information service - Graz interaktiv. The first pilot application was shown at the Technova fair at Graz international fair from 12-14 June 1996. This system has a high technological standard both internationally and also regards its content. Intensive work is being continued on this new citizen’s service via an interactive, multimedia citizen’s information system in a fine-tuned sequence.
Present Situation and Future Perspectives
In view of the size, complexity and networking of this project - implementation of the economic, telecom and tourism model of the city of Graz - various projects are at different stages of implementation. Each project is based on a specific project proposal with a time schedule and plan of activities, a project partner presentation, the project advantages and funding etc. Owing to the wide sponsorship of the project a great many projects have already been put into effect or initiated. This illustrates the position that Graz seeks to achieve and also will make it possible to attain a social, cultural, ecological and economic profit.

Reference to Agenda 21
30

Documents
Economic model of the City of Graz - Abstract
Economic model of the City of Graz - Detailed report
Institution
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Project Title
Company Award „ÖKOPROFIT Company of Graz“

Aims and Contents
By awarding the Company Title „ÖKOPROFIT Company of Graz“, the environmental performance of successful ÖKOPROFIT Companies is honored, and the ecological competition in Graz is promoted. Thus ÖKOPROFIT Companies of Graz are on the way to the Ecological Audit. Due to this, the City of Graz has gone one step further in the implementation of the fixed criteria of last- ingness of the Issue Related Environmental Program, and the committed and innovative ÖKOPROFIT Companies of Graz set a new environmental and economic standard within the European Union.
The model is the EU Decree No. 1836/93 relating to an Ecological Audit in trading companies.

Present Situation and Future Perspectives
The following information or requirements are necessary for obtaining the ÖKOPROFIT Company Award:
The successful participation in a project for avoiding waste and emissions, such as ÖKOPROFIT Graz, is the basic requirement. For being awarded the prize, the Company has to direct a written application to the Environmental Office of Graz as awarding office. The awarding guidelines fix that the environmental performance of the past year and an environmental program for the next year have to be elaborated in addition to a definition of the Company specific Environmental Guidelines and a presentation of the process parameters in form of a fixed checklist so that the Company Award can be obtained.
Site specific environmental operating indices quantitatively describe the intended reduction.
projects in the respective Company.
The awarding office will not only require evidence for the observance of all national environmental regulations but will also review the Waste Management Concept and the waste water situation and make a legal check as to whether there are pending complaints concerning environmental matters. The collected and submitted data of a Company applying for a Company Award are processed by the ÖKOPROFIT Team and submitted in a concentrated form to the Commission for evaluation.

The ÖKOPROFIT Commission (composed of the Head of the Environmental Office of Graz, the Environmental Coordinator of the Province of Styria, representatives of the Technical University of Graz and one representative of a Company honored in the last year) decides upon the Company Award.

The Company Award is valid for one year. The fact that the environmental business program of the Company is reviewed every year is to make sure the ÖKOPROFIT Idea is anchored in the Company on a long-term basis and dynamically continued.

As the awarding guidelines are in accordance with the EU Decree relating to the Ecological Audit, the Environmental Office regards this award as being a preparation for the Ecological Audit and thus as an important step towards the certification of small and medium-sized businesses.

Reference to Agenda 21
4,30,36,40.

Documents
• Publication "Zeichen gesetzt" (M. Baumhakel-Schruef, D. List, Müllmagazin 3/1995)
• Information about "Grazer Ökoprotf-Betriebe Award"
**Institution**  
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+43 316 972710-14

**Project Title**  
Graz ÖKOPROFIT for Beginners

**Content and Aims**  
In this series of workshops, companies are systematically guided towards an introduction of corporate environmental care. The main elements of good environmental management are taught and applied in practical work of the participating companies. These efforts are supported by the existing workshop documents. The support and help provided to the enterprises during the program is essential and not to be underestimated. It is decisive for success.  
The concept is especially aimed at convincing as many companies as possible, even those without environmental problems, to participate and also at making the ÖKOPROFIT award known throughout all lines of industry. The award should become something worth striving for.  
The series of introductory seminars has become internationally known under the name “ÖKOPROFIT method” and should help to create an awareness for ÖKOPROFIT and ÖKOSTADT 2000.
Present Situation and Future Perspectives

ÖKOPROFIT - short for Ökologisches Projekt Für Integrierte UmweltTechnik (ecological project for integrated environmental technology) was introduced in Graz in 1991. Since then, 44 companies from approx. 30 different lines of industry with a total of approx. 14,000 employees and a turnover of approx. 3,02 bill. ECU have participated in the project. The ÖKOPROFIT program of Graz with all its various environmental achievements of the participating companies has ensured savings in all fields of corporate environmental care which in turn has a considerable influence on the emission balance of the city of Graz.

The following future perspectives of the ÖKOPROFIT project result from the specifications of the environmental program:

- Integration of the twenty largest producers of waste, waste air, waste water and noise in Graz in the program
- At least 15 new members of the Ökoprofit Club per year
- Promotion and motivation of implementing voluntary measures for environmental protection exceeding legal limit values and official regulations
- Strengthening and/or establishing direct contacts between Graz Department of Environmental Protection and companies in Graz
- Positioning ecological measures as positive economic factors

Reference to Agenda 21

19, 21, 30, 31, 34

Documents

- ÖKOPROFIT Workshop documents
- ÖKOPROFIT Information folder
Institution
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Project Title
Municipal Energy Concept - "Ökoprofit-Energie"

Content and Aims
The successful Ökoprofit project (ecological project for integrated environmental technology) launched by the city of Graz in 1991 has proven that ecological provisions need not cost companies money, but can rather even step up profits.
This successful project is now to be expanded by an energy efficiency focus. To this end, an analysis of the current energy situation of the company will be carried out with the aim of ascertaining and subsequently implementing possibilities of optimising and increasing the efficiency of the company on the basis of weaknesses detected. This initiative is thus aimed at increasing efficiency in the use of energy in the company / in production (excepting room heating) in the industry, trade, small consumer and public sectors. In particular, the 20 biggest energy consumers in Graz are to be integrated into this project. The aim is to reduce annual energy consumption by 310 kwh p.a. up to the year 2010 by increasing efficiency.

Present situation and Future Perspectives
Even now, there are corporate counselling seminars and workshops underway under the heading of "help to self-help".

Reference to Agenda 21
4, 9, 30, 36
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Content and Aims
ÖKOPROFIT depends on the voluntary participation of enterprises. It is, however, necessary that
• ÖKOPROFIT is and becomes known and
• the participating companies become known to the public through their participation in the project.

In addition to that, the city is interested in making its environmental policy known.

The PR work justifies the use of public means, since not only the participating enterprises are promoted, but also the idea is made known.

Present Situation and Future Perspectives
The following is carried out in the framework of PR work, depending on the target group:
• Annual brochure presenting the companies that received the ÖKOPROFIT award
• Video about the companies awarded the prize
• Local press work
• Meetings, scientific work

Reference to Agenda 21
4, 30, 31, 43, 36, 40

Documents
• ÖP Brochures 1994 and 1995
• ÖKOPROFIT video
• List of publications: ÖKOPROFIT booklets
• ÖKOPROFIT-Graz: Information about the Ökoprofit-Modules
• Newspaper articles
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Project Title
From ÖKOPROFIT to ECO-AUDIT

Content and Aims
It is planned to have the greatest possible number of companies with EU Eco-Audit certification in Graz. The following advantages can be expected:

• Reduced environmental pollution in Graz
• Highly innovative potential concerning ECO-HIGH-TECH
• Competitive advantage for participating enterprises
• Promotion of the projects through subsidies from the Federal Government

Present Situation and Future Perspectives
This is the first project year and three companies, which have already concluded the ÖKOPROFIT program, are taking part in the ECO-Audit project. Companies are taught theoretical knowledge, they work out contents in workshops and receive support up to the eco-audit (= last step before external certification).

This module also includes the elaboration for four ECO-Audit documents (following the example of the ÖKOPROFIT booklets):

• Eco-Audit and environmental policy
• Establishment of an environment report
• Environmental management system I
  (manual, ...)
• Environmental management system II
  (procedures, ...)

Reference to Agenda 21
19, 21, 30, 31, 34

Documents
ECO-AUDIT manual
Institution
Amt für Umweltschutz,
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Griesgasse 11, A-8020 Graz

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Project Title
Local Agenda 21 - Ökostadt 2000 Graz - Local Infrastructure for Implementing a Sustainable Economic Development in Consideration of Socio-Economic Aspects

Content and Aims
The implementation of the environmental program is now calling for a further development stage: In addition to optimising the production processes, the products themselves have to be included in the work and the abandoning of technologies that are a burden to the local and/or global environment must be promoted. At the same time, the public awareness has to be drawn to products with a long shelf-life and corresponding repair philosophies - always in consideration of socio-economic aspects.

The innovative content of this project therefore also refers to the holistic approach exceeding the company and its environment situation. In this approach, an ecologically-oriented economy is considered to be the prerequisite for a sustainable society. The avoidance of waste and emissions in the framework of the project improves the ecological situation of the regions, improves the quality of life and helps companies to save costs. Repair is another approach for minimising material flows and creates new markets and jobs, mainly in the service sector. A committed administration supports the creation of suitable infrastructure and makes the orientation of a region’s economy towards an Eco-High-Tech city possible.
Present Situation and Future Perspectives
The focus of the project applied for will be on the following topics until 2000:

- Abandoning of the extremely polluting PER technology at dry cleaners; step-by-step substitution of old plants by wet cleaning systems (80% by 2000); creation of central units of a dry cleaner network for joint use of cleaning plants.
- Development of products requiring small amounts of materials and energy both in production and use.
- Use of materials that correspond better to sustainable economy (avoidance of scarce raw materials, increased use of biogenic and local materials, recycling materials as well as recycle-friendly product design
- Assessment of products according to ecological criteria and listing of all possible materials meeting ecological standards that could be used as a substitution (examples of successful changes of materials, “building material catalogue”); development of decision-making criteria and methodical support for application in SMEs.
- Information of the public about ecological products and services in the region (repair guide); promotion of services where material products are replaced and or the shelf-life is prolonged. Possibility of retraining and integrating unemployed people and people without permanent residence in the services mentioned above.

The results of the project will be published in the form of reports at a local and international level.

Reference to Agenda 21
4, 28, 30, 40

Documents
EU application
Institution
Amt für Umweltschutz,
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Griesgasse 11, A-8020 Graz

Project Title
ÖKOPROFIT Club

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+43 316 972710-12

Content and Aims
The experience gained over the last few years has shown that it is essential to maintain the contact between companies (after they have concluded their first ÖKOPROFIT year) and to offer them certain supporting programs. Evaluations of a series of international programs have proven that it is irresponsible to leave companies alone after the initial courses and training. This would be contradictory to the spirit of continuous and active environmental protection in companies. The interactive ÖKOPROFIT Graz approach, with the ÖKOPROFIT awards granted, requires further support of the participating companies.

Present Situation and Future Perspectives
In the current project year, 20 companies are taking part in the ÖKOPROFIT continuation program.

Further support of ÖKOPROFIT companies after the first year is focused on:

• Implementation of the projects and plans worked out;
• Renewed granting of the ÖKOPROFIT award;
• Support to achieve further goals, such as Eco-Audit and eco product design;
• Exchange of experience beyond lines of industry;
• Support of companies in distributing the ÖKOPROFIT concept within their lines of industry;
• Use of possibilities for developing ECO-HIGH-TECH and technology export in the field of cleaner production;
• Better possibilities for medium and long-term evaluation

The problems concerning companies that continue the program include some interesting aspects (implementation, motivation, flexibility) and exceed purely environmental problems by far.

ÖKOPROFIT booklets:
• ECO-AUDIT as a basis for environmental assessment of small and medium-sized enterprises.
• Analysis for optimising the application of sliding agents on enamelled wires.
• Dry cleaning, final report.
• Waste water measurement; printing house.
• A material-flow analysis in car repair enamelling.
• Preparation of solvents - Alfred Wall AG.
• Safety-technological data for HC solvents in dry cleaning.
• Newspaper articles

Reference to Agenda 21
19, 21, 30, 31, 34

Documents
ÖKOPROFIT booklets
Institution
Amt für Umweltschutz,
Referat für betriebliche Umweltvorsorge,
Griesgasse 11, A-8020 Graz

Project Title
EDP supported Environmental Management and Environmental Information Systems

Contact
Dipl. Ing. Dr. Barbara Moshammer,
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Aims and Contents
A documentation and visualization of business and process data that is as complete as possible is, in particular, almost indispensable in view of optimization measures in the process and in cleaner production. The formation of indices makes still another contribution.

A working Environmental Management System also comprises an efficient Environmental Information System in the Company. It is also EDP Programs that are increasingly being used for support.

Present Situation and Future Perspectives
In this project module, the EDP System „Audit“, an Environmental Management and Information System, is being created. For this,

• environmental indices are formed
• waste and emission data before and after the implementation of measures for avoidance are compared
• a dynamization calculation at changeable boundary conditions is visualized
• environmental cost are determined and measures for avoidance are assessed economically.

Thus the operating data of selected Companies are to be shown at the end, and their time related change (environmental situation before and afterwards) is to be represented. Then Companies are to be able to make statements on the efficiency of an EDP supported Environmental Management and Information System.

Reference to Agenda 21
30,31
Institution
Amt für Umweltschutz,
Referat für betriebliche Umweltvorsorge,
Griesgasse 11, A-8020 Graz

Contact
Dipl. Ing. Dr. Barbara Moshammer,
+43 316 972710-12

Aims and Contents
Apart from or in addition to the Project for the Avoidance of Waste and Emissions ÖKOPROFIT-Graz and the ECOPROFIT Award to Companies, it is possible to directly grant subsidies for measures in environmental protection. Companies that voluntarily invest in measures that are of benefit to the municipal environment by reducing emissions can count on being given financial support by the City of Graz.

Present Situation and Future Perspectives
The procedure is simple and unbureaucratic. The Company sends a written application to the Environmental Office of Graz by describing the measure(s) taken by it and the resulting emission reductions. The Environmental Office of Graz examines the information and will, if necessary, directly contact the applicant for subsidy. If the information is conclusive and traceable and if the measures seem worth granting subsidies in the sense of environmental protection, a motion for voting will be presented to the Municipal Senate of Graz. If this motion is voted in the Municipal Senate, the amount of the subsidy can be paid out. This form of direct support is possible up to 30% of the invested sum or max. 22,641,51 ECU.

Reference to Agenda 21
4, 30, 31.

Documents
• Guideline issued by the Municipal Council
• Information about the development of the subsidies for environmental protection in companies (1986-1996)
Installation of an Information Center for
Ecologically Compatible Production in Graz
(Cleaner Production Center) ......................... 253
Institution
Amt für Umweltschutz,
Referat f. betriebliche Umweltvorsorge
Griesgasse 11, A-8020 Graz

Project Title
Installation of an Information Center for Ecologically Compatible Production in Graz (Cleaner Production Center)

Contact
Dipl. Ing. Dr. Karl Niederl,
+43 316 872-4300

Contents and Aims
The National Environmental Plan has, among other things, fixed that the intensification of ecologically compatible production is of strategic importance and is to be supported by suitable measures in infrastructure.

The installation of an Information Center for Ecologically Compatible Production is to fulfill these tasks and guarantees

• an immediate environmental relief by the avoidance of emissions and waste as well as by the increase in the efficiency in industrial production,

• the intensification of the development, trial and propagation of „clean technologies“

• the strengthening of competitiveness as well as the long-term protection of Graz as economic base by environmental innovation impulses.

The Center is to be installed as turning point or information platform for the issues of clean production before competition starts.

Therefore, the following items are to the fore:

• imparting ecologically relevant technology information (technological, scientific state of the art)

• Information on the technical and organizational solution of problems in clean production

• Information on consulting services, expertises and literature as well as

• exchange of experience

• education and further education, training the execution of

• impulse programs for clean production

• analyses of the structure of Cleaner Production Projects in Companies

and the stimulation of
• research and development in clean production and clean technologies
• generation of new fields of research
• transfer of scientific findings to corporate practices

Present Situation and Future Perspectives
The Information Center for Ecologically Compatible Production will be organized as Private Limited Company („Gesellschaft m. b. H.“) and will have its seat in Graz.
Primary tasks are the transfer of ecologically relevant technology information as well as the imparting of information on technically organizational solutions of problems in environmental protection in Companies, the organization of exchange of experience, education and training in integrated environmental protection as well as the execution of impulse programs by stimulating research and development programs for clean technologies. The Center will support central concerns of environmental policy, such as the quantitative reduction of material flow as well as its qualitative transformation by making it ecological by compatible. The quick and unbureaucratic access to information
on optimal technologies available for the avoidance of emissions and waste is another important factor for the implementation of regulations in environmental law.

The Information Center for Ecologically Compatible Production particularly is to have close contacts to foreign institutions that have a similar task or identical targets. Due to this, Austria and, in particular, Graz are to be integrated into an international network of preventive environmental protection. This will also be of utmost importance for both our economy and our ecology. For the fact that such foreign institutions can help Austria to establish contacts relating to the export of Austrian environmental technologies into its Eastern neighboring countries will also bring about a considerable reduction of the domestic pollutant emissions.

Reference to Agenda 21
2, 4, 8, 9, 18, 19, 20, 21, 30, 31, 34, 35, 38, 40

Documents
Report given to the Municipal Council
Agenda 21

32
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Strengthening the role of farmers ............... 266
Consulting agricultural producers and market gardens .............................................. 268
Waste disposal on farmers’ markets .......... 269
Contents and Aims

The 13 agricultural produce markets (farmer’s markets) in the city provide local farmers with the opportunity of improving their chances in the sense of Nos. 14) - Promotion of sustainable farming and rural development - and 32) - Consolidating the role of the farming community of "Agenda 21".

With its 13 farmer’s markets and a total of approx. 800 agricultural suppliers, the city of Graz is clearly amongst the leaders of all European cities in this respect. Hence, the city of Graz may also be seen as being exemplary in promoting and consolidating the farming community.

The enclosed information contains the most important data pertaining to management of the farmer’s markets in Graz.

Present Situation and Future Perspectives

Taking a look at the development of the farmer’s markets (1967: 3 farmer’s markets, 1977: 5 farmer’s markets, 1987: 12 farmer’s markets and 1996: 13 farmer’s markets) - some dating back as far as the 19th century - we can see that the city of Graz has made full use of its potential with regard to managing farmer’s markets. Nevertheless, the trend-setting development of "biological produce farmer’s markets" in Graz is definitely being promoted.
Contents and Aims
After the local council elections in 1993, not one farmer was represented in this highest executive body of the municipal authorities. The agendas of agricultural promotion were assigned to the city councillor in charge of economic promotion (Vice Mayor Dkfm. Ruth Fedlgrill-Zankel). In view of the fact that the local council has no separate committee devoted to agricultural affairs, the vice mayor immediately ordered the installation of an Agricultural Advisory Council so that
• farming interests could be adequately involved in political committee negotiations and
• the executive bodies of the local authorities would have a contact for discussing all projects that might affect the city’s farming community. <cf. Agenda 21, Item 40>
The existing farming organisations (Chamber of Agriculture, ARGE bäuerlicher Selbstvermarktung (Association of Self-Marketing Farmers), cattle breeding co-operatives, bee-keeping co-operatives, field vegetables and fruit farmers, seed breeding co-operatives et.) have designated their representatives. The Section of Veterinary Medicine will assume management.

The Agricultural Advisory Council’s work will be focused on the following:
• Discussing the situation of the farming community in the city (e.g. constantly increasing restrictions on cultivating farms and other property <cf. Agenda 21, Items 10 and 14>)
• Informing the bodies and sections of the local council in charge of the specific problem areas (e.g. elaboration of urban development concept, green spaces programme <cf. Agenda 21, Items 10 and 14>, issues of hail control)
• The individual members of the Agricultural Ad-
visory Council and their organisations are always at pains to draw public attention to the situation and work of the farming community in the city (e.g. invitation of school classes to farms, presentation of use of beneficial insects in pest control, summer festivals, farm produce markets <cf. Agenda 21, Items 38>).
• Application and consultation on issues of direct agricultural promotion (e.g. focal points of promotion policy <cf. Agenda 21, Items 14, 15 and 19>, amount of assistance payments <cf. Agenda 21, Item 33>)

Present Situation and Future Perspectives
• Currently we can see no alternative to the essential work of this council!
• With regard to organisation and the legal side, the local councils will have to adopt rules of procedure after approving the appropriate guidelines.

Reference to Agenda 21
10, 14, 32, 33, 38, 40
In this sector, there is a need for information on the correct waste disposal. What is specifically problematic for these branches of business is the distinction between waste to be assigned to the Packing Decree („Verpackungsverordnung“) and bulky waste.

Various businesses are concerned:
- Agricultural producers of outdoor vegetable, fruit growers and market gardens and and florists resp.
- Flower shops are also incorporated into the project.

Via contacts with the competent trade guild or professional representation, written information is sent to the businesses.

Information material specific to these branches of business is being prepared.

Aims of the Project:
- Introducing possible strategies for avoiding waste,
- Waste separation,
- Making the consumers aware of products of domestic agriculture.

Beginning: June 1996

Some businesses have already been consulted.
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Müllberatungsstelle 0316/295625

Project Title
Waste disposal on farmers’ markets

Aims and Contents
The competent offices were contacted: within the Municipal Authorities, representation of the farmers and dealers, Chamber of Agriculture.

At an event organized for the owners of market stalls, the transformation to separated disposal was announced by the „Wirtschaftshof“. At the same time, the farmers were informed on the practical execution by the Waste Consultants.

By means of personal contacts on the spot, the problems specific to the stalls were solved.

The collection of the market waste was partly re-organized.

Present Situation and Future Perspectives
Beginning of the project: June 1996

The contacts with the superior authorities have been established. The farmers have already been informed in writing, the first information event will take place in August.

Reference to Agenda 21
32
Financial Mechanisms

Agenda 21

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Finanzielle Mechanismen
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"Solar Project Heinrichstraße" ...................... 267
Institution
Magistrat Graz, Amt für Umweltschutz,
Referat für Energie und Klima,
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Project Title
Graz Environment/Energy Subsidy

Content and Aims
The city of Graz offers the following non-refundable direct subsidies as a measure of air-hygienic sanitation:

a) Social subsidy for district heating for changing from the existing heating system to district heating. This social subsidy depends on the income per household and the number of people living in the household; it amounts to 75% or 25% of the costs incurred by the change, connection costs excluded.

b) Subsidy for natural gas: Lump sum subsidy of 150,94 ECU for changing to natural gas heating with calorific value technology.

c) Subsidy for solar energy: Subsidies of 37,74 ECU per m² of installed net collector surface (75,47 ECU for vacuum tube collectors) are granted when solar energy is used for warm water preparation or heating in existing houses and for solar collectors of new buildings.

d) Subsidy for solar-low-energy houses: Buildings with a collectible energy value of less than 30 kWh/m².a - due to active and passive use of solar energy and special heat insulation measures - are granted a subsidy of 15,09 ECU per m² inhabited area, max. 2,264,15 ECU per inhabited unit.

e) Subsidy for alternative energy: A subsidy amounting to 25% of the costs, max. 3373,58 ECU, are paid for the installation of plants for the use of alternative forms of energy.
Present Situation and Future Perspectives

Up till now the city of Graz has paid subsidies amounting to 3.62 mill. ECU for district heating (since 1986), 8452.83 ECU for natural gas (since 1995), 158,490.57 ECU for solar energy (since 1991), 2,264.15 ECU for solar-low-energy houses (since 1995) and 3,186.79 ECU for alternative energy (since 1995). An increasing number of applications is expected because of the increasing promotion of low-energy solar construction and the decision taken on the compulsory connection to the district heating network.

Reference to Agenda 21
3, 4, 7, 8, 9, 30, 33, 34, 36, 40

Documents
Statistics sheet
KEK report no. 19 (Project No 19, File 9)
Instruction cards
Newspaper articel
In cooperation with the Building Promoter BPMS, the „Steirische Ferngas AG“ (Styrian Long-Distance Gas Public Limited Company) runs a solar installation with a collector area of 100 m² and a buffer reservoir of 6000 l as well as a gas condensing boiler with 130 kW in a house with 29 dwelling units. The project aims at a cost efficient supply with usable heat and hot water for the occupants while, at the same time, minimizing the use of fossil energy carriers by an efficient technology and renewable energy carriers. Due to the „Outsourcing“ of the heating and solar installations, the building expenses are minimized as well.

Present Situation and Future Perspectives
The installation is being built and will be put into operation in the heating period 1996 / 97. The „Steirische Ferngas AG“ is going to run this installation for 15 years and supply the occupants with space heating and hot water by means of a contract for the delivery of heat.

Reference to Agenda 21
4, 7, 8, 9, 30, 33, 36, 40

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Institution
Magistratsdirektion Graz
Rathauskorrespondenz
Rathaus, 8010 Graz
Internet address: wolfgang.skerget@iicwifi.at

Contact
Dr. Roswitha Hrubisek-Preininger
872/2221 or 2223 Fax: 872/2229

Contents and Aims
Local policy action programmes of the city of Graz are supported by continuous PR and press work which is organised and implemented by the town hall correspondence department.
At the same time, the department also issues current information on stages of implementation of various projects both internally - i.e. cross-department - and externally, to target groups in the population. The aim is to achieve the objective of heightening public awareness of specific municipal authority actions in Graz.

In addition to the submission documents, the work of the town hall correspondence department hereinafter depicted in the form of brochures, newspapers and press cuttings can be indicated in items 4, 5 and 8 of the application form.
Of course, public relations work is centred around a holistic and integrated approach. All areas of municipal administration are affected by this and are constantly involved by way of co-operation and consultation. Moreover, contacts are also maintained to other public facilities and institutions, such as Styria Province, federal ministries, interest groups or local initiatives in the sense of exchanging information and experience. This partnership approach is reflected in the task of being a bridge between the public and the administration. Specific target groups such as traffic initiatives, environmental protection organisations, children’s and youth groups are also involved in projects.

A scientific, comprehensible system of evaluation is not always possible in PR work and awareness heightening. However, the success of our work can be demonstrated by participatory opportunities of
public involvement and also public acceptance of the projects. Examples include target-specific information on the city newspaper BIG - Citizen’s Information Graz in the form of special issues, e.g. in elaborating an urban development concept, a traffic concept and other urban environmental programmes.

Experience gained in special municipal projects is exchanged at the national and international level in collaboration with other municipal administration authorities. Furthermore, there is also the opportunity of presenting the city as a whole with all its manifold tourist, culture or conference facilities.
Present Situation and Future Perspectives

For the future we are planning to install new information services along the lines of the above objectives with the aid of the latest communication technologies. For example, we are currently preparing an extensive presentation of model municipal projects at the city and local level for the Internet, national and international. The aim is to provide a general overview of the sustainable city Graz by this autumn. We are also preparing a participation in a local city radio and TV programme and publication of our own newspaper for employees of the municipal administration authorities. Furthermore, a special training programme for dealing with representatives of the media and customer/citizen-friendly administration is being prepared in the course of an administration academy for all employees of the municipal authorities.

Reference to Agenda 21

36

Documents

- "BIG" Citizen's Information Graz
- Newspaper articels
- Anual Report of 1994
- Book "Alles über die Stadtverwaltung - Ein Wegweiser durch den Magistrat Graz"
**Institution**
Magistrat Graz - Stadtschulamt
Wielandgasse 7, 8010 Graz

**Project Title**
Tutoring („Lernbetreuung“)

**Contact**
Departmental Head Dr. Just 8052/821
Deputy Elfi Heindl 8052/844

**Contents and Aims**
In 1989, the Municipal Supervisory School Authority („Stadtschulamt“) has, in corporation with the Labor Exchange („Arbeitsmarktverwaltung“), installed the Tutoring of the Municipal Supervisory School Authority. The City of Graz sees a double success in the Project „Tutoring“. On the one hand, qualified private lessons can also be given to children of socially disadvantaged parents. On the other hand, this project helps unemployed teachers, who are employed in this project.

Up to now, the success of tutoring has been promising. 80 - 90 % passed the later examination in autumn. The parents only have to pay a contribution towards covering the expenses of 0,943 ECU per pupil and lesson.

The long-term aim is to limit private lessons.

**Present Situation and Future Perspectives**
The Project Tutoring is executed in cooperation with the Office for Youth and Family. The following projects are planed as well:

Traffic Instruction
The Municipal Supervisory School Authority has also installed a school for traffic instruction, in which pupils attending Primary School, Secondary Modern School and Polytechnics („Volksschule“, „Hauptschule“, „Polytechnische Lehrgänge“) are instructed by doing practical exercises. The overall cost for the personnel and the maintenance of this school is entirely borne by the Municipal Supervisory School Authority.

Program „Pupils’ and Adolescents’ Groups Visit Graz“
This program has been executed by the Municipal Supervisory School Authority for decades, the ex-
Penses for the guides being partly borne by the City of Graz. This program aims at helping Styrian pupils to better get to know the history and culture of their Provincial Capital.

**Pupils’ Exchange with the Sister City of Pula**

Since 1974, 30 children and 3 teachers have come to Graz every year, spent 3 days with visits in Graz and taken part in a skiing course with a partner school. An invitation from Pula allows a partner school to spend one week in June in Pula.

**Reference to Agenda 21**

36

**Documents**

Newspaper articles
Institution
Magistrat Graz, Amt für Umweltschutz,
Referat für Energie und Klima,
Griesgasse 11, A-8020 Graz.

Contact
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Contents and Aims
The CO₂ Emission has to be reduced but what can the individual person do for this? Under the slogan „Climatic protection can make fun“, the Environmental Office of the City of Graz and the Provincial Energy Association Styria assigned the creation of a computer game, which was presented on July 9th, 1996.
The program playfully shows the possibilities to contribute to protecting the climate even in daily life, at home or on the road, in professional life or in the spare time, when shopping or in the household. The way this works can be found out by anyone who plays the game. According to the personal situation and the preferences, all spheres of life can be examined to find energy saving measures that can be taken. The effect on one’s own CO₂ Emission can be constantly reviewed. Often it is the small changes that have far-reaching effects, the Climate Game shows how!

Present Situation and Future Perspectives
The Office for Environmental Protection has produced 2000 copies of the Climatic Protection Game, which are given to the population of Graz free of charge. In autumn of this year, the game will, in cooperation with the Working Group Environmental Education be specifically sent to the schools in Graz, the teachers will be shown the sense and contents of the game again and asked to give feedback relating to the gathered and evaluated results to the Office for Environmental Protection.

Reference to Agenda 21
4,7,8,9,25,31,36,40.

Documents
Floppy Disk „Climatic Protection Game“ with Envelope
Institution
Magistrat Graz,
Amt für Umweltschutz,
Referat für Information und Dokumentation,
Griesgasse 11, A-8010 Graz

Contact
Wolfgang Thiel 872/4306

Contents and Aims
The alternative Graz Environmental and Nature Guide “ÖKOTOUR” is not a conventional city map or a travel guide but rather is an attempt to present environmental protection and nature conservation as essential elements of our “everyday culture” - as a kind of “green thread” through a networked urban space. As an alternative city map, ÖKOTOUR is aimed not only to arouse interest in numerous cultural monuments in Graz. This “green guide” to Graz is also planned to draw attention to a network of a total of 43 ecologically relevant sites ranging from the park and tree to the nature trail, from the low-energy house to the waste water treatment plant, from the biotope to the solar power filling station, primarily aimed to invite schoolchildren or families to put together their own ÖKOTOUR.

They were selected with the aid of around 50 environmental protection and nature conservation groups, then presented for inspection and evaluation to around 20000 school-goers and teachers in Graz in the course of the permanent schools programme ”A city worth living in”, and finally presented to the population of Graz and visitors to the city in the form of an environmental and nature guide and multimedia CD. The publication is issued free of charge and the CD is given to related institutions and above all educational facilities. Now it is up to the local and foreign ”(ECO) tourists”, preferably on foot, by bike or with public transport (also indicated in the guide), to rediscover the city of Graz, to visit around 43 ”eco-sites” and to stay a while and reflect.
Present Situation and Future Perspectives

open system

Reference to Agenda 21

36

Documents

Ökotour Plan
Ökotour-CD
Newspaper Articles
**Institution**
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

**Contact**
Wirtschaftshof 0316/29 56 25

**Project Title**
Pilot project circus

**Contents and Aims**
Open-air parties and events are among the „waste problems“ of our City. In order to achieve a separating and disposal standard that is usual elsewhere in other spheres, a special disposal service will be installed for a circus giving performances. Information material, know-how and the freely interchangeable disposal units are provided by Waste Consultants of Graz and the „Wirtschaftshof“.

**Present Situation and Future Perspectives**
There is a continuous information flow between all people concerned. The review and documentation for further events are being elaborated.

**Reference to Agenda 21**
4, 28, 36
Contents and Aims
In the last few years, we could state that number of people interested in environmental issues is increasing more and more. The Waste Consultants of the "Wirtschaftshof" of Graz support this commitment shown by the citizens by providing various information materials. For long-term changes in behavior can only be achieved by the pressure exerted by a critical public.

The Waste Consultants have been looking for active citizens (individuals, groups, associations, trade and commerce) willing to elaborate proposals for the avoidance and separation of waste together with us and participate in the implementation.

By means of reply cards, the citizens could inform us if they were ready to support us in the information work.

Present Situation and Future Perspectives
Regular cooperation with the active citizens
Improvements in the information work
Intensified recruitment of active citizens

Reference to Agenda 21
4, 21, 36

Documents
View of the data stored in the Data Base of the Multiplicators
In the last 10 years, the Waste Consultants of the „Wirtschaftshof Graz“ passed a lot of information material on to persons interested.

As for the contents, this material was / is exclusively elaborated and created by the Waste Consultants. As for design, the Waste Consultants are often supported by graphic artists and print shops. Important criteria for this are topical issues, (e.g. avoiding waste, problematic substances, Packing Decree („Verpackungsverordnung“), collection of bulky waste) as well as topics with which we are approached. A clear and easily understandable presentation of information to the citizen also is of utmost importance to us.

Our information is gladly requested in Austria as well as from the neighboring countries.

In order to make sure the quality requirements put on „advertising messages“ can be fulfilled, it was already for the second time that the outward appearance was completely changed in cooperation with an advertising agency in 1996.

Adaptation of all information to the new layout
Specific information on certain topics
Consideration for the citizens’ wishes

Various information brochures and sheets from 1986 to 1996
The "Wirtschaftshof Graz" has cooperated with various non-profit institutions for many years. We would like to briefly present three of these institutions:

1. **Association Ban**
   The Association BAN was founded in 1985 and soon developed into a socio-economic job creation project. Since that time, the Association has been a reliable partner in environmental issues for the City of Graz. This Association is active in clearance of junk, waste collection, separation and recycling. In 1996, it was awarded the ÖKOPROFIT Title in 1994 and 1995 and in 1996 the "environmental protection title" of the City of Graz. On the premises, a public recycling yard and a collection station for problematic substances was installed. The collecting station is run by a Waste Consultant of the Association.

2. **ARGE Müllvermeidung**
   (Working Group Avoidance of Waste)
   The Association ARGE MÜLLVERMEIDUNG has, in cooperation with the Provincial Labor Exchange, offered training for Environmental and Waste Consultants for ten years. As one of the first cities, Graz participated in this project and employed two trained Waste Consultants after the training in 1986 and two additional trained Waste Consultants in 1987. Today the work of Environmental and Waste Consultants is already done by 150 persons all over Austria. Due to constant changes in waste management, additional training, special training for, e. g., Compost, Energy, Sewage Water Consultants, or training for Waste Representatives in Companies had to be developed and executed. Furthermore, the Association is subsidized by work
contracts, e.g. creation of printed work.

3. ÖKO Service GmbH
(Private Limited Company)
A common idea by the ARGE MÜLLVERMEIDUNG and the Association BAN
The demand for personal services in environmental matters, (e.g. chopping service, compost preparation, recycling) is constantly increasing.
An essential goal aimed at when this Company was founded was to create additional jobs for socially disadvantaged persons (persons that had been unemployed for a long time and / or handicapped persons). The combination of work and training is to make it easier for persons that are difficult to place to (re)start work. The non-profit ÖKO Service GmbH is subsidized by the City of Graz by work contracts.

Present Situation and Future Perspectives
Subsidizing by useful work contracts
Extending the cooperation

Reference to Agenda 21
4, 36

Documents
Copies, newspaper articles
Contents and Aims

„1st Austrian Day of the Environmental Sign „1. Österreichischer Umweltzeichentag“ in Graz“

The bearers of the Austrian Environmental Sign were documented in a photo exhibition. Texts for the lastingness complete it all. By means of the Winning Wheel created by the Waste Consulting Agency of Graz, products with the Environmental Sign were raffled. 1 positive list for consumers (purchasing list) and 1 corresponding list for companies relating to the guidelines specific to the branches of industry were prepared.

The consumers and producers are to be made more aware of the Austrian Environmental Sign as symbol for extensive environmental protection.

The Municipal Authorities Graz - Purchasing Department, which implements „Ecological Purchasing“ as project, was presented as positive example.

Way of Presentation

Extendable photo exhibition with enclosed information material for consumers and companies. Winning Wheel Game with questionnaire to the topic, price sponsoring by bearers of the sign.

Present Situation and Future Perspectives

After the opening day, the exhibition was presented as „Environmental Street“ in the City Hall for one week. It can be extended and is to make people aware of the sign as touring exhibition. Working material for schools is being elaborated, there are already inquiries.

Reference to Agenda 21

4, 25, 36

Documents

Information Material
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Müllberatungsstelle 0316/295625

Project Title
Tombola

Contents and Aims
Winning Wheel Game »How do I dispose of waste correctly?«
A Winning Wheel Game serves to approach the consumers with the correct handling of packing and hazardous substances from the household („problematic substances“). In order to specifically address the group concerned, there is a cooperation with the relevant Sales Departments. The prizes are sponsored by the respective partner for the game. The Waste Consultants of Graz supervise the game and provide the information material.

Way of Presentation
Winning Wheel Game with questionnaire to the topic, price sponsoring by partners for the game. Opening with the presence of mass media and prominent people.

Present Situation and Future Perspectives
Up to now, there have been two games, which were well received. Other games are being planned.

Reference to Agenda
4, 21, 25, 36

Documents
Information material
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

Contact
Müllberatungsstelle 0316/295625

Project Title
Avoiding waste on parties

Contents and Aims
Pilot Project »Augarten-Fest«: System of returnable cups
In order to avoid big quantities of non returnable dishes, a system of returnable cups was financed in cooperation with the organizer. Information posters inform on the project on the spot.

Way of Presentation
Big posters and personnel on the stalls for taking back the cups.

Present Situation and Future Perspectives
Though the time for preparation and implementation was relatively short, the trial was well received. The use and extension of the system for further events is intended.

Reference to Agenda 21
4, 25, 28, 36

Documents
Information leaflet
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8020 Graz

Contact
Müllberatungsstelle 0316/295625

Contents and Aims
Newspaper articles

News on the work of the „Wirtschaftshof“ and the Waste Consultants
Special reports on campaigns, etc., can be found under the corresponding topic.

Way of Presentation
Newspaper reports

Reference to Agenda 21
4, 28, 36
Institution
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-6
8010 Graz

Contact
Müllberatungsstelle 0316/295625

Contents and Aims

Fairs
• Graz Fair 1987 »Compost is Humus for Tomorrow« Description at the Compost Project
• Graz Fair 1988 »The Power(lessness) of the Consumer«
• Graz Fair 1989 »Hazardous Substances and Energy«
• Graz Fair 1994 »Avoiding Waste«
• Technova 1994 »Acting and Consulting«

Exhibitions
• Touring Exhibition »Environment and Energy« 1989-1990
• Touring Exhibition / Photo »Everything under Control?« 1990
• Touring Exhibition / Photo »ABAVMMPTEP-SAKOMPDEP« 1990
• Information Booth at the Party of the Austrian Association of Students ÖH („Österreichische Hochschülerschaft“) 1992

Way of Presentation
Information booths; photo exhibitions; exhibitions of objects

Present Situation and Future Perspectives
Information booths and exhibitions are among the most important and cost efficient tools of our public relations. Topics are being constantly updated, the way of presentation is adapted to the requirements.

Reference to Agenda 21
4, 25, 28, 36

Documents
Information Material
Public Awareness

**Institution**
Magistrat Graz
Wirtschaftshof
Sturzgasse 5-7
8010 Graz

**Contact**
Müllberatungsstelle 0316/295625

**Project Title**
Campaigns / Parties

**Contents and Aims**
- Interviews »Avoiding Waste...« 1987
- Series of campaigns with signature campaigns
  »Deposit Bottle made of Glass« »School Action
  Yoghurt in the Glass« »Yoghurt in the Glass
  »Milky Way« 1987 - 1989
- »Mobile Waste Consultant« 1988
- Christmas Campaign »A Nice Mess« 1988
- »Christmas Party - Packing Party« 1990
- Campaign against apparent solutions »Crystal-
  Clear à Decision Deposit System« 1992
- Cooperation with K&Ö »Waste is not Dung« 1992 (Description in leaflets)
- Graz Environmental Party »Comparison of two Purchases« 1992
- Graz Party for the Avoidance of Waste »Avoidance of Waste for Retailers« 1993
- Graz Party for the Avoidance of Waste on the Graz Autumn Fair »Gastronomy« 1994

**Way of Presentation**
Actionism

**Present Situation and Future Perspectives**
Though events of this kind require much personnel and time, they are a striking and therefore a necessary way of imparting contents.

**Reference to Agenda 21**
4, 25, 28, 36

**Documents**
Information Material
## Institution
Magistrat Graz AG,
Bereich Wasser,
Korösistraße 29, A-8010 Graz

## Contact
DI Helmut Werner
887/283, Fax: 887/786

## Project Title
Promotion of Education and for Water Awareness

## Contents and Aims
In order to further heighten and develop public awareness of water issues, the Water Section of Grazer Stadtwerke AG is organising one-day seminars for teaching staff at secondary schools and universities. Staff of the water supply department, the Office of the Styrian Provincial Government and the Sewers Section of the Municipal Authorities will hold informative lectures on subjects related to geological and hydrogeological principles of water procurement, water supply technology, qualitative aspects and water protection, and also the problems of waste water disposal, discussing questions brought up by the participants. The second half of the seminar will be a tour of plants and facilities of the water supply department and the water laboratory.

In addition to comprehensive lecture notes, participants will be provided with free information material such as brochures, posters, transparencies and video films.

Furthermore, a travelling exhibition on the subject of drinking water will be offered to schools and water projects and other programmes with teachers and pupils will be carried out.

## Present Situation and Future Perspectives
The teacher seminars have been held twice a year for five years now; so far, more than 400 teachers from a variety of schools have taken part. In the knowledge of the multiplier effect of this event, it is to be continued also in the years to come.

## Reference to Agenda 21
36, 18, 21

## Documents
Brochure Lehrerseminar (Project No. 90, File 18)
Brochure “Wissenswertes über das Grazer Wasser” (Project No. 90, File 18)
Institution
Kulturvermittlung Steiermark
Kunstpädagogisches Institut Graz
Wielandgasse 9, 8010 Graz

Contact
Kunstpädagogisches Institut
Tel.: 0316/81 69 75 Fax: 0316/81 53 97

Project Title
Kulturvermittlung Steiermark - Kunstpädagogisches Institut Graz

Contents and Aims
The association „Kulturvermittlung Steiermark - Kunstpädagogisches Institut“ (cultural didactic and pedagogical institute of art) was officially founded after two years of preparation in 1988.

The activities of the KV include various intentions: its main goal, however, is to bridge the gap between the common reception and the contemporary developments of art through various projects and exhibitions.

These activities are aimed to make people aware of different facts and problems in 20th century art and culture. The KV’s main target group are people who have not been much involved in art. Various projects point out the network of art and other areas of life to provide an easy access to art and an indepth understanding.

Our exhibitions are accessible to various institutions, e. g. museums, adult training centers, galleries and schools; places with little experience in cultural work are preferred.

An important part of our activities is the presentation of successful cultural achievements that have been produced in project work at schools to a wider public, esp. to other schools.

We also advise teachers on managing cultural events at schools (contact, handling, financial matters). We provide the know-how and lend technical supplies for such projects.
Activities
1. Distribution and curation of didactic touring exhibitions
2. Projects to promote creative pupil works of art
3. Cultural information
4. KultRent
5. Advice to teachers and artists on handling cultural events
6. Support of artists and initiative groups

Reference to Agenda 21
25, 36, 37

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Institution
Magistrat Graz, Amt für Umweltschutz,
Referat für Energie und Klima,
Griesgasse 11, A-8020 Graz

Contact
DI Karl Heinz Lesch,
tel.: +43 316 972658-16, fax: +43 316 872-4309
e-mail: afumwelt@mbox.tu-graz.ac.at

Project Title
Obligation to Use District Heating

Content and Aims
This project aims mainly at emission reduction in order to make the air of Graz cleaner. The district heating supply network is to be expanded based on the 2.0 zoning plan of the year 1992, in which priority areas are laid down. Connection should only be compulsory in the framework of renovations and/or new buildings requiring authorisation as well as for large buildings with more than 100 kW connected wattage within a certain period of time.

Present Situation and Future Perspectives
By October 1995 3000 consumers with a peak load of 265 MW and an annual amount of 605 GWh were connected. The thermal output of the existing power-heat-coupling capacities that can currently be used for district heating is approx. 550 MW. Based on the obligatory use of district heating and the resulting expansion of the district heating network, the proportion of district heating used for room heating is planned to increase from currently 25% to 45% by the year 2010, i.e. 5000 connected households.

Reference to Agenda 21
4, 7, 8, 9, 30, 36, 39, 40

Documents
KEK Reports no 7 (Project No 82, File 10)
KEK Reports no19 (Project No 62, File 9)
KEK Reports no21 (Project No 60, File 9)
Decision-making

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CONTROL PLAN OF GRAZ ....................... 301
Decisionmaking

Institution
Amt für Umweltschutz,
Referat für betriebliche Umweltvorsorge,
Griesgasse 11, A-8020 Graz

Contact
Ing. Daniela List, +43 316 972710 -13
Dipl. Ing. Dr. Barbara Moshammer -12
Margit Baumhakel-Schruef -14

Project Title
Investigation of abandoned polluted areas

Aims and Contents
This action program aims at initiating and implementing an investigation program. Though this program mainly relates to sites that have been shut down, it also deals with existing sites at which contamination is suspected. As this program serves to take first steps for possible sanitation measures, it is the complement necessary for the investigations of abandoned polluted areas made by the Federal Environmental Office.

Present Situation and Future Perspectives
- Suspicious Area „Gas Works Rudersdorf“
  Based upon intensive research done by the Environmental Office, the Federal Ministry for Environmental Protection has assigned more extensive studies for the Suspicious Area „Gas Works Rudersdorf“ in the Municipality of Graz.
- Scrap Preparation Plants for Passenger Vehicles
  In 1995, heavy ground contaminations on the area of a Company Recycling Used Cars were based upon a concrete occasion - determined. As these contaminations clearly indicated the percolation of mineral oils, such Companies are to be investigated even more in future.
- Landfill Köglerrweg
  See Item 18 „Groundwater Sanitation Dumping Ground Köglerrweg“, Wirtschaftshof Graz

Reference to Agenda 21
40

Documents
Report UBA „Old Gas Works“
Institution
Magistrat Graz, Stadtvermessungsamt,
Kaiserfeldstraße 25,
A- 8010 Graz

Contact
Dr. Xu 872/4113

Contents and Aims
Planning in Graz is carried out in an efficient and future-oriented way thanks to the use of state-of-the-art technologies. Three-dimensional interactive computer simulations are aimed to assist and accelerate planning processes.

These computer simulations are based upon a three-dimensional city model. This model is a realistic representation of the city - a virtual city - in the computer. Each object such as buildings, trees, traffic routes etc. is stored in such a way that it may be depicted and viewed in all three dimensions. The necessary data are mainly derived from the Digital Map of the City stored on the Urban Surveying Office’s computer.

The numerous possibilities offered by a three-dimensional city model are demonstrated by example of the "Schloßberg". The user can "travel through" the area via the computer, viewing it from any angle. Any changes to be made can be carried out and assessed immediately.

The use of the data stored in the Digital Map of the City also ensures efficient creation of a three-dimensional city model, supported by the latest developments in hardware and software technologies. The application of these new technologies sets completely new standards in processes of planning, as impressively demonstrated by the "Längegasse" example.

Reference to Agenda 21
Documents
Broschures
Institution
Magistrat Graz, Stadtvermessungsamt,
Kaiserfeldgasse 25,
A- 8010 Graz

Contact
DI Strobl             872/4120

Project Title
DIGITAL MAP OF THE CITY / KOGIS

Contents and Aims
Since 1985 a Digital Map of the City has existed based upon land boundaries and buildings registered at the urban surveying office. It is embedded in a superordinate Municipal Local Graphical Information System (KOGIS).

KOGIS is aimed at
- providing up-to-date information
- linking graphical and non-graphical data
- accessing graphical data by means of alphanumeric search words
- accessing alphanumeric data via graphical elements
- statistical evaluation of data and graphical assignment

By linking data related to environmental protection, urban planning, sewers and housing, the

Present Situation and Future Perspectives
Currently, further data bases are being recorded and applications created in a series of detail projects; existing data records are being appended and updated.

Reference to Agenda 21
40
Contents and Aims
Photogrammetry (metrophotography) is a rational method of collecting large-area 3D natural data, i.e. determining the location and height of the surface of the earth for example buildings with roof design, green spaces with vegetation, bodies of water, built-up areas etc. with high precision (location ±10cm, height ±10-15cm).

Since 1989 a photogrammetric department has been in operation at the urban surveying office with the task of efficiently and economically collecting natural data. The basis of metrophotography and interpretation is aerial surveying. With the aid of special camera equipment vertical photos are taken of the terrain from an aircraft. Such aerial photography of the entire city area is carried out at intervals of approx. 4 years.

Present Situation and Future Perspectives
Thanks to the possibility of direct use and access to analogue and, in the near future, digital aerial photography data, photographic data can also be made available for large project areas at short notice.

The municipal administration authorities of Graz makes use of these data and analogue graphical representations obtained by means of photogrammetry for a whole range of planning and surveying tasks.

Reference to Agenda 21
40

Documents
Brochures
Institution
Magistrat Graz, Amt für Umweltschutz,
Referat für Luftreinhaltung und Chemie,
Griesgasse 11, A-8010 Graz

Contact
DI. Dr. Werner Prutsch, +43 316 872 4310
DI. Karl-Heinz Lesch, +43 316 972658 16
Hannes Binder +43 316 872 4311

Project Title
THE AIR POLLUTION REDUCTION PROGRAMME AND AIR POLLUTION CONTROL PLAN OF GRAZ

Contents and Aims
The entire area of the provincial capital of Graz as a priority area for air pollution reduction
Remedying these shortcomings is the prime objective of the air pollution reduction programme. This means that the immission threshold values as scheduled by the Immission Threshold Limit Ordinance of the Styrian local government, must be observed even in adverse weather conditions.
Furthermore, the programme is to guarantee that other resolutions relevant to air pollution control are adopted. (z. B. KEK und climate alliance)

The specific aims of air pollution control in Graz can thus be summarised as follows:

- Remedying lacking air quality.
- Observance of immission limit values in all weather conditions.
- Avoidance of air pollutant concentrations with serious effect on hygiene.
- Reduction of CO₂ emissions by 50% by 2010, compared to 1987.
- Reduction of classical pollutants by at least 60% by 2010.
- Ascertaining and reducing emissions of toxic or carcinogenic substances.
- Stopping all CFC emissions.
- Monitoring pollution emission of large-scale emitters.
- Creation and continuation of a current emission cadaster.

These objectives are to be achieved by means of regular monitoring of "sustainability parameters" according to the pre-defined objectives of the environmental programme "Ökostadt 2000".
Present Situation and Future Perspectives

The technical elaboration of the “Grazer Umweltamt” has to be transformed into a national law, on this basis the measures can then be realized.

Link to Agenda 21
40, 6, 9

Documents
A summary is enclosed. The total programme consists of three files, in which everyone can have a look at in the “Grazer Umweltamt”.