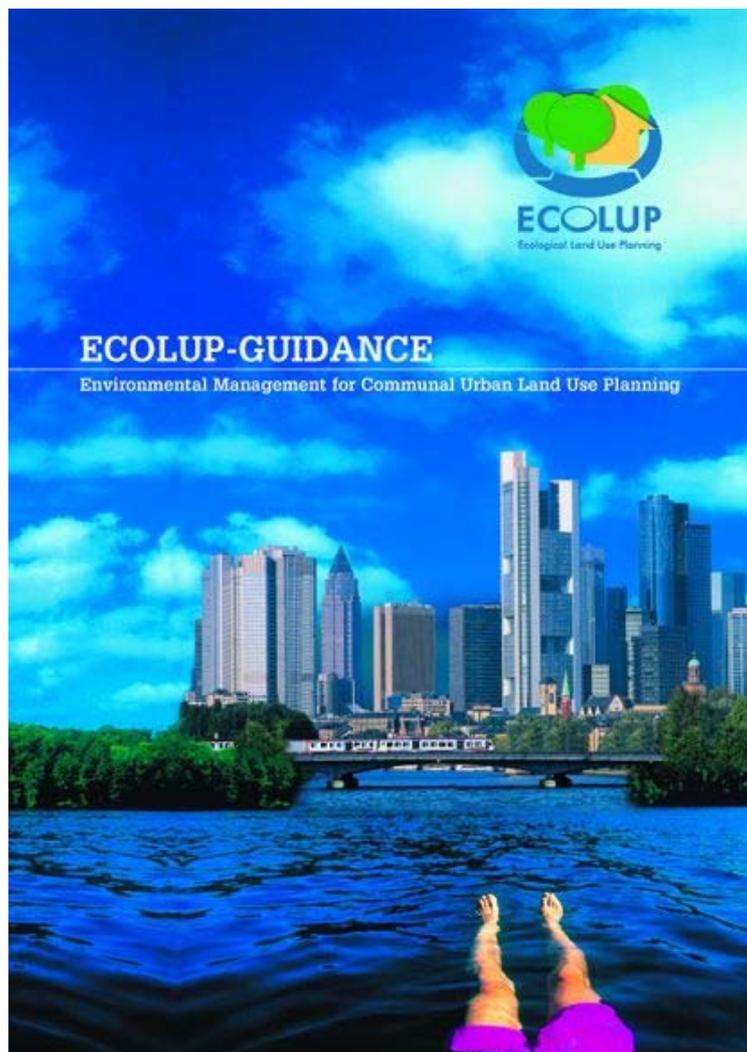




LIFE00 ENV/D/000326

# ECO-LUP: Environmental Management for Communal Urban Land Use Planning

Layman-Report



# **ECO-LUP: Environmental Management for Communal Urban Land Use Planning**

## **Layman-Report**

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# ECO-LUP: Environmental Management for Communal Urban Land Use Planning

## 1. Land Usage: An Environmental Problem



With 147 inhabitants per square kilometre, the European is among the most thickly settled regions in the world (European Commission: Caring for our future, 2000). Here, the built-up surface area increases by 2% every ten years. Aspects of the substantial impact on nature and the environment are: the release of environmental pollutants into the soil, the air and water, increasing traffic volume, excessive settlement of the landscape and natural habitats.

The Lake Constance region represents one of the agglomeration areas in Central Europe within which the environmental problems caused by settlement development can be clearly seen. It offers valuable natural areas and land cultivated by man, high quality of life for living and working, but also the

responsibility for the protection of the drinking water reservoir for 4.5 million people. With 289 inhabitants per square kilometre, the Lake Constance district lies above the EU average. Areas that lie near the lake are particularly desirable - up to 500 inhabitants per km<sup>2</sup> live there. It is attractive to live and work on the lake and this is not going to change in coming years. This means that the communities of the region must take particular care to preserve local natural resources, especially the finite resource land.

Together with the cities of Constance, Überlingen and Dornbirn and the municipality (Marktgemeinde) of Wolfurt and within the framework of the EU Life-Programme, the Lake Constance Foundation has put together a model project centred on ecologically oriented land use planning. The Institute of Applied Research at Nürtingen University was responsible for the supervision of the scientific aspects of this project, which was carried out from July 1st, 2001 through March 31st, 2004.

ECOLUP (Ecological Land Use Planning) is intended to provide a framework within which the European Environmental Management System EMAS II can for the first time be applied to the processes in communal urban land use planning. Through the implementation of EMAS, the environmental impact of communal urban land use planning can be represented in a measurable fashion and the continual improvement of the quality of the environment ensured. The exchange of information between communities and an improved inclusion of local residents and other representatives of interest groups are also among the project's primary aims.

## 2. ECOLUP: An Innovative Approach to Sustainable Regional Planning

The EC Eco-Audit, also called EMAS, is a voluntary management system for businesses and organisations that wish to improve their operational environmental protection measures on a continual basis beyond the practices called for by law.

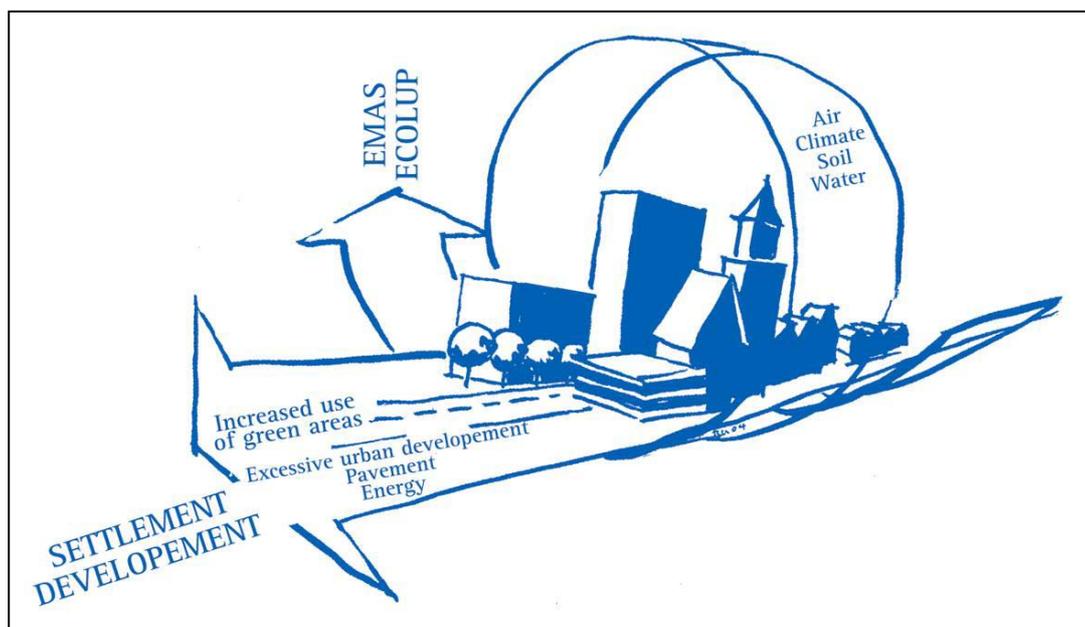


All organisations participating in EMAS regularly draw up an environmental statement for the public. In it, the organisational environmental policy and its environmental programme with concrete environmental goals are established in connection with a complete depiction and evaluation of as much quantitative data as possible reflecting the programme's direct and indirect impact on the environment. Each environmental statement must be evaluated by an independent, government-certified environmental verifier. If it meets the requirements of the EC eco-audit ordinance, the environmental auditor declares the environmental statement to be valid (EMAS validation).

At present, production processes organisational locations or services are audited in accordance with EMAS II. Only in a very few cases has it been applied to municipal planning processes, and in those only to partial processes.

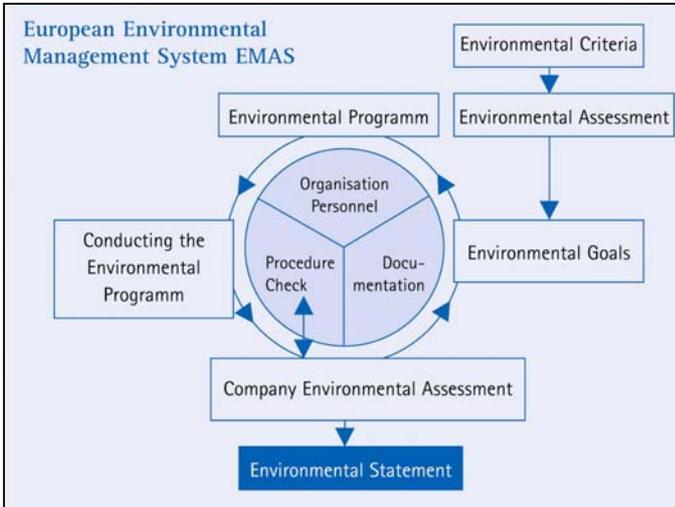
ECOLUP has developed a method through which EMAS can be applied to communal urban land use planning and has defined the following framework:

The municipal administration as the institution directly responsible for the process of urban land use planning undergoes validation. Executive instances within the municipal administration are the specialised departments and offices (building control office or department of city planning), the town council and the mayor. Further specialised and informal plans can also be taken into consideration.



### 3. ECOLUP Procedure

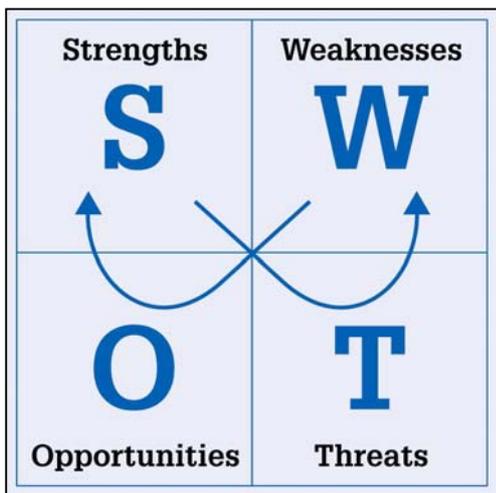
As a part of the **development of the method used**, the conditions established by the various building codes in Germany, Austria, France, and Spain were studied (framework of the building code, legal basis for environmental concerns, applicability of EMAS, comparability of terms in use).



The study concluded that EMAS may be used in communal urban land use planning in other European countries under the following conditions: communal urban land use planning must take influence on the given environmental aspects, the community must be able to influence land use planning, and, finally, the community must be able to involve its citizens and representatives of other interest groups and to establish a monitoring system.

In addition, Nürtingen University established on the basis of which information the analytic instruments SWOT-analysis and the communal workshops should be conducted and identified the environmental aspects on which a municipality's urban land use planning can have a direct or indirect influence.

#### 3.1 Environmental Assessment/ Performance Audit



The EMAS method requires that its implementation commence with an environmental assessment in the form of a SWOT-analysis. The project team and the partner communities collected all available information and reference data, then defined their starting position in the most important environmentally-relevant areas. In the case of environmental aspects for which no current reference figures were available, an exclusively quantitative evaluation was carried out.

An important element of the environmental assessment was the community's economic policy to date and the degree to which it had been taken into account within planning processes. In order to conduct the SWOT-analysis, it was necessary to collect a great deal of data, a time-consuming process, and use it to calculate the statistics required.

In four SWOT-workshops, each community discussed its own strengths, weaknesses, opportunities and threats, corrected their formulation and passed a reworked SWOT-matrix as the basis for all further work.

On the basis of the findings from the SWOT-analyses, the most significant environmental aspects to be used throughout the project were identified:

- excessive urban land use
- sealing-over of soil/use of green areas
- transportation and mobility
- energy and climate
- landscape development

A SWOT-analysis is a useful method for conducting a qualitative analysis of the data and information on the relevant environmental aspects. In addition, these aspects were categorised as either directly or indirectly affecting the environment and the most significant among them were identified. However, the analysis is partially subjective, as data will not be available on the initial condition of all environmental aspects and very few similar data stocks or evaluatory standards exist for comparison. Another factor contributing to the subjectivity of the SWOT-analysis is the spectrum of those participating in the workshops.

In order to create a basis for a grounded and reliable evaluation of a community's environmental situation, it should make an additional contribution to the SWOT-analysis by compiling a table of reference figures reflecting current conditions. These reference figures should whenever possible be contrasted with those of other communities or with standard values so that the community can see in which areas improvement is needed. A community can conduct such an evaluation of its current situation by using the core set of reference figures drawn up as a part of the ECOLUP model project.

### 3.2 Environmental Policy, Environmental Goals, and Environmental Programme

In each community, environmental teams consisting of representatives from specialised departments and offices, regional authorities, the business sector, environmental organisations and citizen's initiatives were founded.

Supported by the Lake Constance Foundation and Nürtingen University, the environmental teams drew up the environmental goals and the concrete measures to be undertaken in achieving them for the EMAS environmental programme in five topical workshops. The overarching aspect citizen involvement / participation was discussed in a workshop of its own, where goals and measures for the improvement of participation were established. Experts and regional authorities provided background information and indicated potential for political action. After the workshops, the environmental programme was reworked and improved so that it could be presented to the town council for discussion and approval. The environmental programme is a decisive element of EMAS, for on the basis of its contents, the mid- and long-term benefits for the environment (continual improvement) are determined. In the environmental programme, the partner communities commit

themselves to the continual improvement of the environmental quality of their urban land use planning and summarise their most important goals within this context. The environmental policy and programme are to be made accessible to the public by means of an environmental statement.

### Exerpts from the Environmental Programmes of the ECOLUP Partner Communities

In the environmental programmes, the concrete goals and measures for the significant environmental aspects excessive urban land use, sealing-over of soil/use of green areas, transportation and mobility, energy and climate, landscape and flowing water, as well as for the overarching aspect participation were established. Because the communities commit themselves to realise this environmental programme to the greatest extent possible when they undertake an EMAS validation, a first potential effect on he environment can be read from this decision. This is only the case if the measures are realised within the planned timeframe and in their entirety and the positive effects are not obliterated by other, negative develops that lie outside of the municipality's influence.

ECOLUP Example: Environmental Programme Constance								7.4 Environmental Aspect Sealing / Use of Green Areas
Environmental Goal	Measure	Reference Data	Responsible	Groundwork	Schedule	Budget	Priority	
Disconnect rain water pipe system from waste water/sewage pipe system; re-exposure of soil on commercial and private properties	Introduce and implement two separate water utility fees (tendency according to separate measure of charges (for property parcels >1000 m <sup>2</sup> ) for existing and newly-built structures)	Surface area with new separate rain water pipe system and re-exposed soil in m <sup>2</sup>	Department for City Planning and the Environment (Amt für Stadtplanung und Umwelt, ASU)	Public Waste Disposal, City of Constance (Entsorgungsbetriebe Konstanz, (Amt für EBK), civil engineering offices	Continuous	Continuous budget	A	
	Continue entries into sealed ground register based on Geographical Information System (Geo-Informationssystem, GIS)	-	-	-	-	-	-	
	Introduce and apply new regulations in water-supply code Baden-Württemberg (codification in development plan)	-	-	-	-	-	-	
Improved proportion of green areas within Petershausen neighbourhood	Green area figure for relevant area	Dev. plan Herosé; dev. plan Great Lakes, dev. plan Petershausen Station	ASU	Civil engineering offices, Agenda groups	Herosé 2004, Great Lakes 2006, Petershausen Station 2006	Continuous budget	A Herosé, B Great Lakes B. Petershausen St.	
Improved public access to lake	Extend path along lakeshore ("Seeuferweg")	Surface area of public green areas along lake, compare how land used in m <sup>2</sup>	ASU	Department of Public Works, Constance (Technische Betriebe Konstanz, TBK), civil engineering offices	2005	Continuous budget	A	

ASU – Departement of City Planning and the Environment (Amt für Stadtplanung und Umwelt)

EBK: Public Waste Disposal, City of Constance (Entsorgungsbetriebe Konstanz)  
 TBK: Department of Public Works, Constance (Technische Betriebe Konstanz)  
 Priority: A = Environmental goals requiring immediate realisation  
 B = Environmental goals to be realised in the mid-term  
 C = Environmental goals to be realised in the long term

### 3.3 Compliance Audit and System Audit

The communal workshop on the topic of "Implementing an Environmental Management System" was prepared in communal workshops and concentrated on the structural requirements set by EMAS for the organisation of a municipality's administration (System Audit). A certified verifier explained to the communities what concrete requirements EMAS makes of an environmental management system, the most important elements in the validation process according to EMAS, as well as the criteria applied by an environmental auditor.



In the workshop the most important EMAS elements were integrated into the existing structure and a potential EMS organisational structure as well as a documentation and communication structure validator were sketched. The compliance audit (how legal conformity and access to current legislation are guaranteed) was also drawn up as a part of this workshop.



As a part of the test certification, each partner community collected the documents relevant for EMAS, which were then presented to a certified environmental verifier for auditing. The document assessment was successful in the municipalities of Constance, Überlingen, and Wolfurt. Dornbirn provided the environmental verifier with only the environmental policy and the environmental programme for assessment. The municipality did not draw up all the necessary documentation because its administration does not plan to achieve an EMAS validation.

## 4. Monitoring: ECOLUP Core Set of Reference Data

Nürtingen University identified a core set of 16 reference figures by means of which the achievement of sustainable development within communal urban land use planning can be measured in order to quantify the goals set and to provide a means of checking the effectivity of the measures undertaken. For example, reference figures are calculated on the percentage of land used for various purposes and the intensity of that use, the degree to which soil has been sealed off, to what extent green areas have found use in various areas, to what extent land use potential has been exhausted, the percentage of regenerative energy of total energy use or the percentage of protected areas within the community.

These reference figures are easy to calculate and provide a great deal of relevant information. Further reference figures are provided in a list of environmental aspects to be found in the ECOLUP guidance.

## 5. Comparison to Other Instruments and Directives

The most important instruments and directives with relevance to communal urban land use planning were compared with ECOLUP's goals and its projected procedure in order to analyse differences, overlaps, and potential synergetic effects. In cases where a Strategical Environmental Assessment or Plan-UP directive (directive 2001/42/EG), the FFH directive, the EU water framework directive, and the Local Agenda 21 program is to be applied, an environmental management system in accordance with EMAS provide valuable information and the organisational foundation for a successful application.

## 6. Exchange of Ideas and Information, Communicating the Results



In order to promote an exchange of ideas and information among the partner communities and with other communities in the international Lake Constance region, three international events and a final conference were organised, that were attended by circa 300 members of the participating communities. All project partners came up with a great number of means of communicating the results and maintained regular contact with all important institutions and networks at the national as well as the European level. The project was presented at 57 regional and international events. In this way, the ECOLUP exhibition and the brochure reached over 12,000 persons, most of whom were multipliers.

Good contacts to regional as well as international media paid off in the form of extensive and positive reporting, even though the topic in itself is quite difficult and not particularly “sexy“. Eighty articles appeared on the project.

**ECOLUP**  
Ecological Land Use Planning

**Ecological Land Use Planning...**

**Long-term goal:**  
The goal is to establish preparatory and legally binding sustainable land use planning through the development and introduction of an Environmental Management System (EMAS) in urban land use planning at a local level.

**Main questions:**  

- In EMAS (EMAS-Management and Audit System) applicable to planning processes?
- Will the urban land use planning through non-environmental be more sustainable? (Benefit for the environment)

**ECOLUP and EMAS**  

- Who can get the certification?
- According to EMAS is the municipality in the process manager of the urban land-use planning can get the certification.
- Competent authorities are the specialist department (building authority or urban planning), the municipal council, and the mayor.
- What is being certified?
- The planning process and the results.
- The land-use planning includes development and building plans. Additional plans and informal plans can be incorporated.

**Methodology and measures**  

- Each partner community set up an environmental team with representatives of all relevant administrations and interest groups (district-level).
- SWOT-analysis (strengths, weak points, opportunities, threats) to define the initial position of the partner communities regarding all environment-related aspects.
- Discussion of the analysis results and setting priorities.
- Communal workshops in each partner community to develop aims and concrete measures for each relevant environmental aspect (development program).
- Indication to relevant and SWOT-factors and measures.
- Environmental policy and environmental program adopted by the municipal council.
- Comprehensive information of the local public.
- International workshops to exchange experiences between municipalities of different regions and countries.

**Partner communities:**  

- Konstanz
- Überlingen
- Biberach
- Wülzburg

**Example Überlingen**  
 Guide for land use planning and green belts:
 

- Realisation of urban follow land
- Closing of building gaps in the city
- Reduction of traffic areas
- Economical land saving site development
- Protection of forest areas
- Strengthening of private and trade areas
- Establishing connections between green spaces
- Green measures of the green structure plans.

**Communal workshops**  

- Introduction Environmental Management
- SWOT-analysis
- Land use planning
- Setting Green belts
- Water Mobility
- Energy Climate
- Landscape / Water
- Implementation Environmental Management System
- Participation / Civil involvement

**EMAS-Project ECOLUP**  
 is coordinated by the Bodensee-Stiftung and is financially supported by the Fürstbischöfliche Stiftungen, University of Applied Sciences.

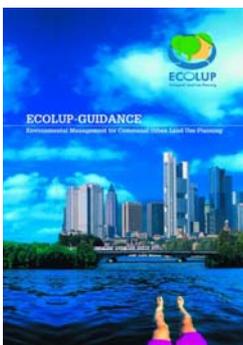
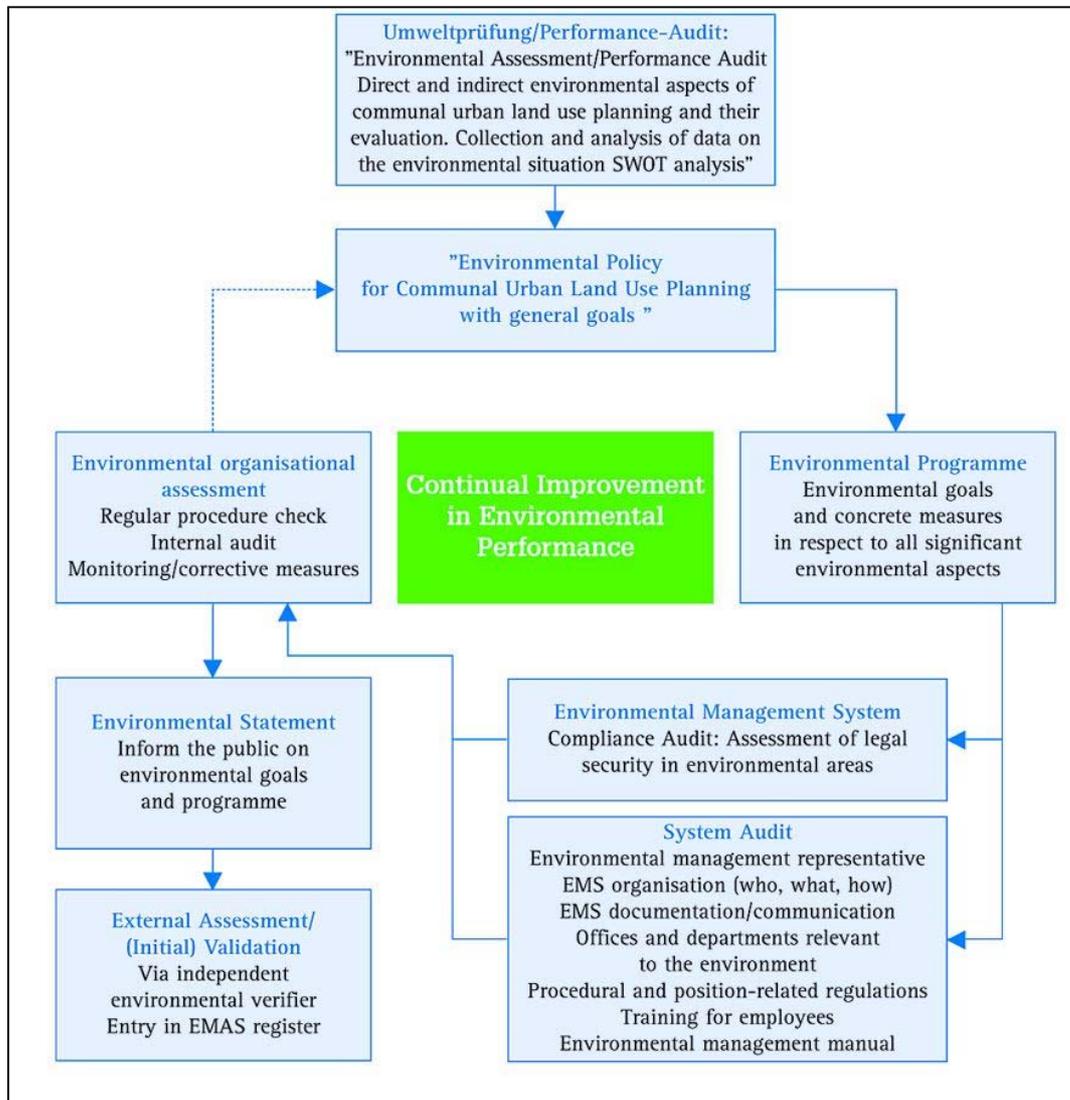
[www.ecolup.info](http://www.ecolup.info)

The ECOLUP pool of knowledge available at [www.ecolup.info](http://www.ecolup.info) provides interested communities and experts with information on EMAS, the ECOLUP method, reference data, the legal framework, citizen participation, as well as links, literature, and contacts

The project's directors informed the EMAS and Urban Environment Departments of the European Commission on a regular basis about the project's progress and was, among other things, involved in the meeting for the ministries of member countries responsible for EMAS (EMAS Art. 14-Committee) and in the EU working group that produced a report and recommendations on the topic of sustainable urban management.

## 7. ECOLUP Guidance

Among the most important instruments for communicating the project results is, along with the pool of knowledge available at the website, the ECOLUP Guidance. In the course of its 120 pages, the manner in which all elements of an environmental management system in accordance with EMAS II can be brought together are explained step by step, as well as the procedure to be used in introducing it. The structure of the guidance is of course determined by that of the EMAS ordinance:



The additional CD-ROM contains the guidance as a PDF-file, as well as survey results, tables, graphs, checklists, and documents to be used in the practical application of an environmental management, as well as the papers presented at the workshops. The German version of the guidance appeared in a printing of 1,000, of which 800 have already been distributed. The English version of the guidance is available in the form of a CD-ROM (200 copies) and can be recopied, if need be. Both versions are available as downloads from the [www.ecolup.info](http://www.ecolup.info) website.

## 8. Evaluatory Process throughout the Course of the Project and Assessment by Council of Experts

In the **evaluation that accompanied the project**, the expectations of all participants were identified in interviews and then analysed. Each element of the project was assessed independently.



- All four pilot communities were able to profit from the SWOT-analysis, using it as a basis for further steps towards the implementation of an environmental management system. Representatives of the communities have reported that the reference data they calculated together are still being used in the individual municipalities.
- Environmental management is regarded as useful due to its tendency to substantiate conditions and goals as well as to establish continuity. However, in the pilot communities, the environmental policy was already relatively well developed and filled-out before the project started.
- Opinions differ concerning EMAS certification; to date, only one of the four communities has taken the necessary council decision. The hesitation of the others has varying causes; the most important factors are the great effort involved in the certification process, the difficulty in adapting it to communal politics, and the lack of general knowledge about EMAS in Austria.
- All participants evaluated the guidance very positively. Problems were identified in respect to the applicability of the project's results in other countries (language, legal framework).

The **ECOLUP council of consulting experts**, consisting of representatives of 10 specialised offices and institutions, also contributed to the project's evaluation. At the ECOLUP final conference, the council presented its assessment:

## Quantifiable Goals and Measures

Advantages	Disadvantages
<ul style="list-style-type: none"> <li>• Orientational function, improved communication towards those involved</li> <li>• Reliable figures for planning long-term policy</li> <li>• Problems represented objectively</li> <li>• Evaluatory aids in setting priorities</li> <li>• Goals easier to evaluate</li> </ul>	<ul style="list-style-type: none"> <li>• Not everything can be quantified</li> <li>• Abstraction, reduction of reality</li> <li>• Quantification requires prior knowledge of starting situation</li> <li>• EU provides data collected according to various methods</li> </ul>
Potential	Restrictions
<ul style="list-style-type: none"> <li>• Makes it necessary to agree on goals</li> <li>• Greatest potential for agency at communal level</li> <li>• Conflicts regarding goals are made apparent</li> <li>• Accountability, benchmarking</li> <li>• Issue of integrity in communal politics</li> </ul>	<ul style="list-style-type: none"> <li>• Comparison between municipalities possible to only limited extent</li> <li>• Dependence on upper-level political decisions</li> <li>• Reference figures must represent different areas in order to be representative</li> </ul>

## Usefulness of an EM-System for Communal Urban Land Use Planning

Advantages	Disadvantages
<ul style="list-style-type: none"> <li>• Planning for future needs more efficient, optimisation of use of resources</li> <li>• Environmental goals set down in writing have higher value</li> <li>• Raises awareness of local residents, agents</li> <li>• Motives specialised offices and dep'ts via accountability</li> <li>• Internal communication improves</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental management as fig-leaf</li> <li>• Weighing of interests is limited</li> <li>• System development costs time and resources</li> </ul>
Potential	Restrictions
<ul style="list-style-type: none"> <li>• Participation can be encouraged and framework with more accountability created</li> <li>• Increased awareness of environment</li> <li>• Increased efficiency and quality in administration and political councils</li> <li>• Benefits to environm. over level required by law</li> </ul>	<ul style="list-style-type: none"> <li>• Communal urban land use planning often too restricted a field to make an impact due to its lack of influence on own environ. aspects</li> <li>• Marathon instead of sprint – endurance necessary</li> <li>• Successes not tangible in the short term K</li> </ul>

## Validation in Accordance with EMAS

Advantages	Disadvantages
<ul style="list-style-type: none"> <li>• Greater acknowledgement of environmental performance</li> <li>• Much information for town council, often with evaluation from neutral 3rd party</li> </ul>	<ul style="list-style-type: none"> <li>• Relationship benefits to effort</li> <li>• Statement "our community is environmentally friendly", even when improvements small</li> <li>• Period of 3 years too short</li> </ul>
Potential	Restrictions
<ul style="list-style-type: none"> <li>• Involve regional institutes and create basis for comparable data stocks</li> <li>• Establish connections to processes at other levels of politics</li> </ul>	<ul style="list-style-type: none"> <li>• EMS ties up resources missing from other projects or tasks</li> <li>• Potential for competency conflicts</li> <li>• Town council's decision sets the tone</li> <li>• Environmental auditor's knowledge of communal politics</li> </ul>

## Concrete Improvements to Environmental Situation in the Communities

Immediate Improvements	Become Evident Later
<ul style="list-style-type: none"> <li>• Auf Entscheidungsgrundlagen beschränkt: Organisation, Prozesse, Kommunikation, Umweltbewusstsein</li> </ul>	<ul style="list-style-type: none"> <li>• Materielle Verbesserungen der Umweltsituation</li> <li>• Kurzfristige Kosteneinsparungen</li> </ul>
Potential for Improvement	Restrictions to Improvements
<ul style="list-style-type: none"> <li>• Create transparency</li> <li>• Environmental issues become more important</li> <li>• Specialised offices &amp; dep'ts set ambitious goals</li> <li>• Co-operation / network with Agenda 21</li> <li>• Improved weighing of interests</li> <li>• Environmental goals in planning = preventative environmental protection</li> <li>• Keep planing perspective / policy options open</li> </ul>	<ul style="list-style-type: none"> <li>• Dependent upon political support and decisions taken by town council</li> <li>• Costs; patience necessary</li> <li>• Absence of standards for evaluating environmental situation</li> </ul>

## ECOLUP Guidance

Advantages	Disadvantages
<ul style="list-style-type: none"> <li>• Good practical advice and orientation</li> <li>• Procedure is systematised</li> <li>• Improved communicability (versus report on results)</li> <li>• Examples from "community everyday life"</li> </ul>	<ul style="list-style-type: none"> <li>• Experience from lake Constance region, only applicable in terms of EMAS</li> <li>• Tendential loss of current relevance</li> <li>• Need for consultants and training not made immediately apparent</li> </ul>
Potential	Restrictions
<ul style="list-style-type: none"> <li>• Accusation of "random planning" not possible</li> <li>• Aids for imitation = make it easier to opt for environmental management</li> </ul>	<ul style="list-style-type: none"> <li>• Content related to growth region</li> <li>• Based on Central European planning systems and cultures</li> </ul>

## Transferability of Results

Initial positive Effects	Restrictions
<ul style="list-style-type: none"> <li>• Communicative exchange Germany-Austria</li> <li>• New initiative for planning processes</li> <li>• New initiative for revision of EMAS</li> <li>• Acknowledges performance of involved communities</li> <li>• Topic as yet not thematised by EU</li> <li>• Motivation for other cities and municipalities</li> <li>• Interest in project results</li> </ul>	<ul style="list-style-type: none"> <li>• Language</li> <li>• Different situations / pressure to act</li> </ul>

## 9. ECOLUP Experience, Benefits to the Environment

Despite the difficulties presented by determining a date all can attend, the method of holding **communal workshops** proved very effective and is to be recommended:



- the environmental aspects can be discussed from different perspectives by the environmental team members representing various disciplines, who often devise ambitious measures
- the workshops offer an excellent opportunity for the team members and the participating communities to exchange information and ideas
- the expert input helps these workshops to serve as continuing education for all participants
- in the workshop, the communities can take advantage of the positive effects engendered by groups dynamics; furthermore, the costs for the consulting services are lower.

To date, many municipalities have seldom worked with **reference figures**, if at all. The most important core data, e.g. on population density and sealed-over soil may be present, but in varying forms that can often not be compared. It is rare that a city or municipality have its own office of statistics that collects and calculates at a central location all relevant data for communal urban land use planning. Therefore, a first environmental programme from urban land use planning will have to contain a number of measures that do not serve the immediate improvement of the environmental situation, but rather are necessary for the introduction of a continual monitoring system.



**Involving the town council** requires a good deal of tact! It would be best if there were a member of the council on the ECOLUP environmental teams.

However, the team moderator cannot permit the discussion to be misused for the exchange of political blows. If the town council has no time to attend the workshops, it should by all means receive their protocols and be kept informed on the project's progress by the environmental management representative at regular intervals.

Those sceptical of EMAS often object that this system is only concerned with the environment, ignoring the other elements of **sustainable development**, social and economic sustainability. However, in the case of ECOLUP, it turns out that when goals and measures come to discussion, then the social advantages and disadvantages as well as the financial feasibility and the costs and benefits (to the environment) balance also come to play. After all, those goals and measures that appear in the environmental programme should be feasible from all three perspectives.

EMAS' structure and the elements belonging to it such as the environmental assessment, environmental goals and programme, as well as the yearly internal audit provide the municipal administration with **aids in the application and observation of new EU directives** such as the Strategic Environmental Assessment, the EU Water Framework Ordinance or the Flora-Fauna-Habitat Ordinance (NATURA 2000). EMAS's framework can serve to involve instruments improving the participation of local residents such as Agenda 21 and to make the recommendations of Agenda working-groups a permanent part of the mandatory EMAS environmental programme.

Nevertheless, the quality of an environmental management system and the benefits it brings to the environment depends on **political good will**, when all is said and done. EMAS does not set environmental goals, but instead accepts those established by the organisation and assesses their realisation. The environmental programmes drawn up by the environmental teams are only drafts or recommendation that can only be made binding through their being passed by the town council. Only when environmental policy and programme are integrated into daily practice and are taken into account in the town council's decisions, can the concrete benefits to the environment brought about through the environmental programme be estimated.

**Continual improvement to environmental quality** tends to manifest itself in most environmental aspects in the long term. During the ECOLUP project, it became apparent that the area of communal urban land use planning was often too limited due to the fact that the possibility of influence within these planning processes, in particular with respect to aspects such as energy or transportation, is quite limited. The field of urban development would provide more room for adjustment in respect to which goals and measures can be set. The procedure for implementing an EMS described in the guidance can be applied to all planning processes within the field of urban development.

At the time of this report, one of the four partner communities had committed itself to validating its urban land use planning processes according to EMAS. The Überlingen city council took this decision on March 3rd, 2003; the validation process will be completed by the end of July, 2004. The city councils in Constance and Wolfurt municipality will not reach their decision until late June, 2004. The city of Dornbirn has decided against an EMAS validation. On the basis of several examples, experts at Nürtingen University have estimated the concrete benefits to the environment that can be effected when the measures laid down in the communities' environmental programmes are actually realised:



## Überlingen, Measures Affecting Register of Land Zoned for Building



A potential addition 2,000 people could be provided with new housing through retrospective concentration: the study showed a reserve surface area for housing of approx. 150,000 m<sup>2</sup>. Assuming a city structure density with a property parcel surface area of 0.8, this level of housing usage would require a new housing settlement of approx. 20 ha. The desired more efficient use of surface area would be achieved through not zoning additional building parcels for use. This would occur to the extent that the need for additional housing could be directed onto property parcels with low structure density within the city's centre.



## Constance: Measures for Increased Structure Density within the City's Centre



For a new construction project providing commercial space within the city's centre, a prize-winning project has achieved a functional mixture of housing and services with a high usage density. The usage of available space lies at a level markedly above the average found in the rest of the centre, thus raising the housing density of the city as a whole. The exact extent of this increase has not yet been calculated, but it should lie around 1%, which makes a significant contribution to savings in surface area considering how high Constance's settlement density already is.



## Dornbirn, Measures Towards the Construction of New Neighbourhoods, Use of Green Areas



An additional park area was created on a former commercial site for the use of a city neighbourhood. In this way, the surrounding private housing properties have increased in value, as have the flats in the area. As a result, the demand for such properties has increased which in turn has attracted housing interest away from the city's outskirts to sites at its centre. Further related potential and the surface area that can be saved in the process have not yet been calculated.



An area zoned for commercial use has been defined via a land use plan as being divided into large, interconnected construction sites with shared “manipulation areas” for access needs, parking and storage as well as interconnected green areas of the same proportions. The usual designation of 50% total structure surface area, 20% access area, 25% courtyard area, and 5% green areas has been adjusted (figures have been rounded off) to 60% total structure surface area, 20% access and courtyard area (“manipulation“), and 20% green areas. This has led to not only a more efficient usage but also to a clear decrease in sealed-off surface area.

“**What does all this cost** and what benefits does it bring us?” – this is of course the question that decision-makers in politics always ask. In contrast to environmental management in firms or for administrative facilities, in the case of communal urban land use planning there is no savings to cost through the reduction of water, office material or energy use. How can we monetarise improvements to the quality of the environment in Euros and Cents? A community with environmental management in urban land use planning certainly does not receive higher prices for its construction land, nor does it become more attractive as a place for firms to set up shop.



Above all in economic hard times, it is not easy to convince a town council of the economically beneficial aspects of an environmental management system for a community’s urban land use planning. Deregulation of municipal interaction with higher levels of government administration and plus-points for applications for government funds would be of aid in increasing the applicability of EMAS and thus the communities’ motivation to participate. In this way, the authorities responsible for EMAS at the national and international level face the challenge of creating initiatives so that a community with an EMAS validation has even greater benefits in comparison to those without.

## 10. Perspectives for the Future

The European Commission is currently preparing a recommendation for an EU directive on “Sustainable Urban Management“. This directive will be presented to the European Parliament in late 2004 within the framework of the “Thematic Strategy on Urban Environment“, a key element of the EU’s Sixth Environmental Framework Programme. Within the “Thematic Strategy on Urban Environment“, aspects Sustainable Urban Transport, Sustainable Urban Management, Sustainable Construction and Sustainable Urban Design are to be examined.

The Lake Constance Foundation was a member of the EU working group on “Sustainable Urban Management“ that identified the following deficits at the communal level:

- Inadequate co-operation between regional and communal authorities
- Inadequate co-operation between specialised offices within the communities and between the communities
- Data, instruments, and projects not constructed in relation to one another; lack of monitoring
- Communal and regional development occurs in the form of short-term projects drawn up in isolation
- Inadequate participation of local residents and representatives of interest groups
- Inadequate capacities within the communities (personnel, knowledge among managers, etc.)
- Separation of planning and implementation



The ECOLUP LIFE-project has demonstrated that it is possible to apply an environmental management system to a community’s planning processes and that doing so contributes to the elimination of the above-mentioned deficits.

Furthermore, our experience with ECOLUP has reconfirmed that EMAS represents in terms of structures and contents a solid basis for sustainable urban management and can be further developed towards becoming a management system for assuring sustainability.



### Project Co-ordination

Bodensee-Stiftung (Lake Constance Foundation)

Marion Hammerl

Tel: +49 7531 9098-66

m.hammerl@bodensee-stiftung.org

www.bodensee-stiftung.org

www.ecolup.info



### Expert Consultants

University Nürtingen

Institute for Applied Sciences

Prof. Wolfgang Everts

Tel: +49 7022 404-204

wolfgang.everts@t-online.de



### Partner Communities

In Germany: Cities of Constance and Überlingen

In Austria: City of Dornbirn, Municipality of Wolfurt



**Further information:**  
**[www.ecolup.info](http://www.ecolup.info)**