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**The Local Environmental Management Approach Ökoprofit  
– Spatial Proximity Supports Sustainable Development –**

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## Introduction

The last decades have seen a significant change in the way environmental policy is formulated and implemented. New forms of governance have emerged, involving more political levels and cooperation with an increasing range of actors. Concerning the levels of policy-making, the local level gained particular attention from chapter 28 of the Agenda 21 adopted by the United Nations in Rio de Janeiro in 1992. However, it is still not sufficiently clear which capacity to promote sustainable development the local level really can provide and by which factors this capacity is influenced (cf. Gibbs, 2005).

One interesting example in this context is the local environmental management approach Ökoprofit, an internationally registered and copyrighted trademark of the city of Graz, Austria. The award-winning programme is based on the notion of building public-private-partnerships and has spread in Austria, Germany and other European Countries since the 1990ies. Initiated and accompanied by municipalities or counties, a group of companies attends a course of workshops and individual consultations in order to improve the local and global environments (“Öko”/“Eco”) while cutting operational costs (“profit”). After approximately one year the companies undergo an examination before being awarded a certification.

The aim of the paper is to present the Ökoprofit programme as a new form of governance, and to take it as an example to analyse the local capacity to support sustainable development. Referring to earlier theoretical work (Lintz and Beier 2006) the investigation concentrates on the role of spatial proximity of actors given in municipalities and regions. The empirical analysis is based on the case study of an Ökoprofit project which was implemented in Dresden (Germany) from March 2006 to June 2007.

The paper begins by giving some background information on environmental governance, Ökoprofit and space (section 1). Then the Ökoprofit programme is described in detail (section 2). The third section deals with the theoretical relevance of the spatial proximity of actors, highlighting three factors which may contribute to the success of the Ökoprofit programme: close relationships between municipalities and companies, communication to increase public awareness, and group work. In the fourth section the paper presents some the main empirical findings from the Ökoprofit project in Dresden. The paper ends with a conclusion (section 5).

## 1 Environmental Governance, Ökoprofit and Space

In step with the increasing challenge of environmental problems, the last decades have seen a significant change in the way environmental policy is formulated and implemented. Traditionally, the nation state has been responsible for environmental issues. However, against the background of weak problem-solving by public administrations, new modes of governance have emerged. On the one hand, there exist today more political levels which deserve attention. This is the result of a shifting of responsibility from the national government to international (UN) or supranational (EU) organisations, as well as to regional and local institutions. In the scientific literature this shifting of political responsibility to different levels is described as multi-level-governance (e.g. Benz, 2001; Hooghe and Marks, 2001; Schmitt von Sydow, 2001). On the other hand, the range of actors and groups involved in policy-making processes has also enlarged. In addition to the public administrations which are engaged in finding new solutions, private and corporate actors are also involved. Thus, new forms of governance have emerged, character-

ised by flexibility and cooperation (Connelly and Smith, 2003, pp. 172-178; Jänicke and Jörgens, 2004).

Concerning the levels of policy-making, the local level gained particular attention from chapter 28 of the Agenda 21 adopted by the United Nations in Rio de Janeiro in 1992. There it was pointed out that local authorities should play a more important role in achieving sustainable development. Independently of Agenda 21, many other authors have praised both the local and regional<sup>1</sup> levels for their potential in environmental policy. The reasons for stressing the role of the local level are, firstly, the environmentally relevant influence of local policy on infrastructure, business development, urban planning and many other aspects. Secondly, it is believed that due to municipalities' physical closeness to the people and the closeness of people to their economic and natural environment, the formulation and implementation of local policy might be more easily geared towards sustainability (e.g. Braun, 2003, p. 22; Connelly and Smith, 2003, pp. 329-332; Welge, 2003; Spehl, 2005). Unfortunately, explanation or evidence, as to how this factor of proximity works is often lacking.

Concerning the new cooperative forms of governance, Agenda 21 not only points out that the challenges of sustainable development should be tackled jointly by all existing political levels. It also calls for the broadest public participation and active involvement of non-governmental organisations and other groups at each level (Preamble). Partnership is one of the key words. Again, such calls could also be heard independently of Agenda 21, and many new cooperative instruments were developed and used outwith this policy document. In any case, one could suppose that partnerships between governments and other actors are most likely where actors have a close spatial proximity. This builds an interesting link between the local or regional level and new cooperative forms of governance.

Spatial proximity's importance in generating innovation is also reinforced by research in regional sciences. According to the latest literature in that field, it is widely accepted that innovation is the result of collective learning processes. Conversely, learning processes are promoted by the spatial proximity of local or regional actors. The innovative milieu approach (Camagni, 1991; Maillat, 1991, 1998) emphasises the importance of the region's socio-culture as a basis for the emergence of trust-based cooperation and networks. Spatial proximity is thus believed to reduce uncertainty and to guarantee access to innovation inputs.

Both aspects – local or regional level, and cooperation – are important elements of the environmental management approach entitled Ökoprofit. This is a consulting and certification programme to encourage sustainable economic development, created by the Environment Department of the City of Graz, Austria. The core aspect is the notion of building a public-private-partnership-network of local authorities, companies, and other actors working together on local environmental problems. The mechanism is a series of workshops held with a group of companies, which are awarded an Ökoprofit certification after successful attendance of one year. Thus, Ökoprofit should provide motivation and enable an effective flow of information with considerable synergies.

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<sup>1</sup> The regional level in this paper refers mainly to counties or cooperations of neighbouring local authorities.

## 2 Ökoprofit: A New Environmental Management Approach

Ökoprofit is an environmental management approach developed in 1991 by the City of Graz, Austria (cf. Homepage Cleaner Production Centre Austria, CPC; Grothe-Senf and Ludwig, 2002; Braun, Kahlenborn and Frings, 2004; Martinuzzi, Konrad und Kien 2005). It is an internationally registered and copyrighted trademark. “The basic idea of ÖKO-PROFIT® is a win-win-model, using integrated environmental technologies to strengthen businesses economically and simultaneously improve the local environment” (Homepage CPC). Originally developed to improve the environmental situation in Graz, Ökoprofit has been a real success story, spreading all over the world. Today Ökoprofit is implemented in several European countries (e.g. Slovenia, Poland and Russia), as well as Tunisia, South Korea and some Latin American countries. Its broadest dissemination is in Germany, where up to now around 90 cities have implemented the approach and more than 1,800 companies have successfully participated in the programme (2007, City of Munich). Some cities have already started the eighth or even eleventh round of the programme.

On the one hand, in terms of formal and structural requirements, Ökoprofit is “less” than a fully-fledged environmental management system such as the international DIN EN ISO 14001 or the European Eco-Management and Audit Scheme (EMAS). Therefore the term ‘approach’ is used instead of ‘system’, and the programme is easier to accept for small and medium-sized enterprises (SMEs). On the other hand, one can say that it is “more” than these management systems: it can be seen as a programme for sustainable local or regional development. Companies’ goals and regional environmental strategies are linked in Ökoprofit. The competitiveness of participating companies should be improved by saving resources. Beyond that, Ökoprofit also encompasses social aspects in terms of safeguarding employment. By addressing economic, ecological and social aspects, Ökoprofit contributes to the three dimensions of sustainability. Last but not least, proponents of Ökoprofit claim that it offers companies a higher environmental performance than environmental management systems.

Ökoprofit is based on a public-private-partnership model. The most important actors are the local administration, the companies and consultants, as well as the chambers of industry and commerce. This network is a precondition for the implementation of the programme, also helping to promote knowledge-transfer and synergies. The local administration is responsible for the programme’s implementation. It nominates a project manager, in most cases from the environment or business development department, and who is responsible for the management of the whole project. The local administration representatives and consultants are trained at an academy. The consultants are in charge of organising workshops where the relevant topics are taught, as well as conducting individual consulting in the companies (see Fig. 1).

The Ökoprofit basic programme (which can be followed by the Ökoprofit club programme) can be broken down into various milestones: starting with a public kick-off-event it is followed by a series of at least eight workshops. The themes of the workshops are e.g. organisation, controlling, energy, emissions, waste, water, wastewater, hazardous materials, legislation, procurement and occupational safety. At these workshops the Ökoprofit know-how is transferred to the companies. Parallel to the workshop series, the companies use their new knowledge and the provided worksheets for such activities as organising an environmental team, stocktaking, developing an environmental programme, and implementing measures (with consultants providing individual support). The basic programme lasts about one year, ending with an Ökoprofit certification event for those companies which have successfully passed the examination. A brochure containing the results achieved can later be used for public relation activities.

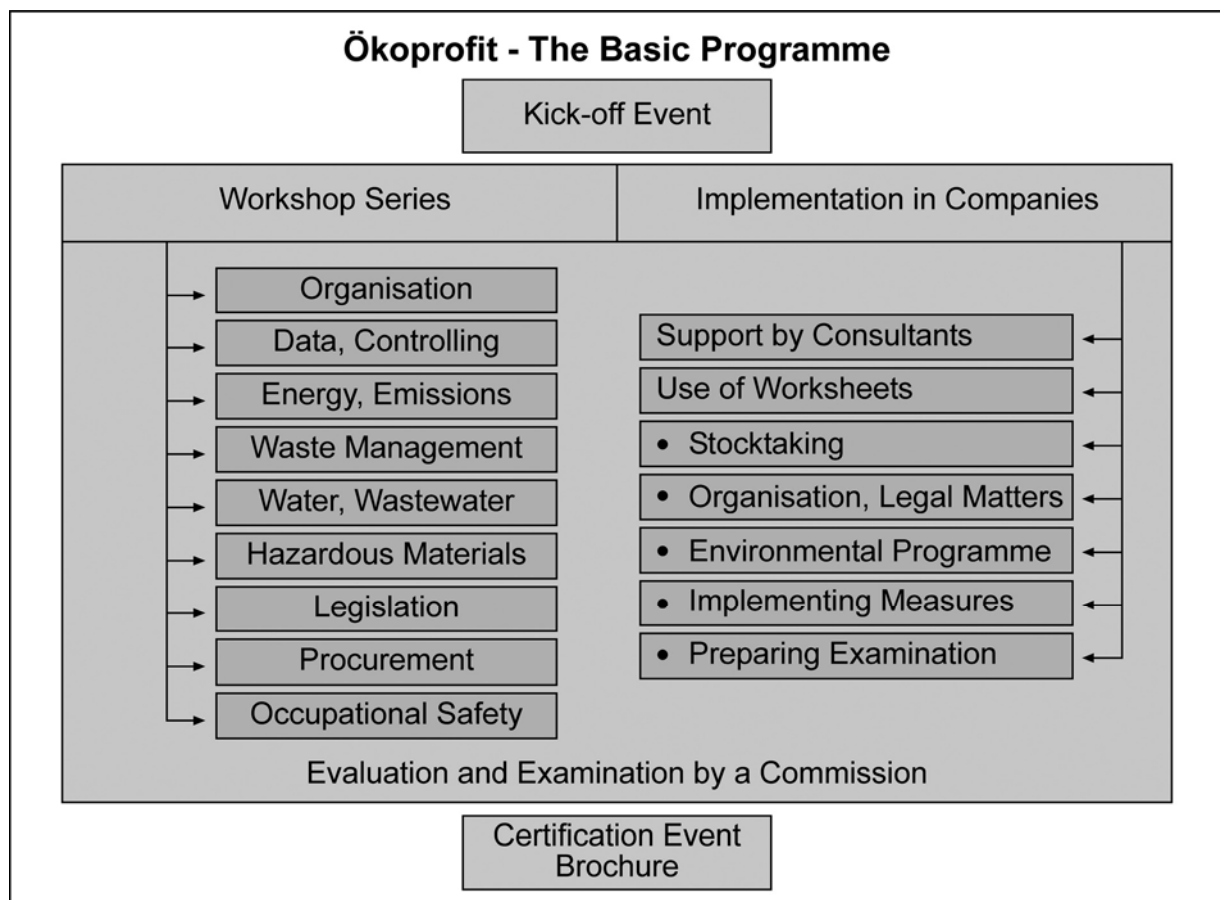


Figure 1: Outline of the Ökoprofit basic programme (own compilation)

The costs of the programme are often shared between the city and the companies, with the local administration paying for Ökoprofit licence fees and training material. Consultants' fees are borne by the companies. Another possibility is to use sponsorship or national funding to help supporting implementation.

The Ökoprofit club programme was developed for those companies which have already completed the basic programme. The club ensures a continuous development and implementation of new measures, while encouraging cooperation between companies, consultants, and local authorities. Companies are given support to achieve and to maintain the objectives of the environmental programme. The club programme also includes workshops, events, and consultations, and can be tailored to individual requirements. Furthermore, participants can benefit from the transfer of information and experience within a local or regional network. The Ökoprofit club is not subject to the investigation of this paper.

### 3 Spatial Proximity of Actors as a Factor of Success – Theory

Although the Ökoprofit programme and its impacts have not yet been thoroughly investigated (at least in comparison to the EU EMAS scheme), one can say it has been successful in terms of popularity with municipalities and companies. General and spatial factors can be distinguished when analysing the determinants of success (Lintz and Beier 2006).

General factors include e.g. the appropriateness for enterprises, as well as the general publicity and awareness of the programme's trade mark and image (cf. Martinuzzi, Huchler and Obermayr 2000, Beier and Lintz, 2005). There can also be different framework conditions in the municipalities and regions, making it easier or more difficult to implement Ökoprofit successfully. Here one can name for instance the number of potential participating companies, the urgency of environmental problems, the administrative capacity and the budgetary conditions.

The fact that general factors can vary across municipalities or regions, and that Ökoprofit can (to a certain extent) be adapted to local and regional needs is interesting from a spatial point of view and worthwhile researching. However, this paper focuses on the proximity of the actors involved as the key spatial factor of success. The analysis starts with general considerations referring to the role of proximity in economic geography and the basic model of local actors and communication structures of Ökoprofit. Then the three spatial factors are examined individually.

### **3.1 General Considerations**

Marshall (industrial districts, 1920) and Hoover (agglomeration economies, 1937) have previously stressed spatial proximity as a factor in the economic success of cities and regions (after McCann, 2001, pp. 55 ff.). Recent discussions in the field of economic geography and regional economics regarding regional clusters, networks and milieus have further elaborated this idea with regard to the determinants of innovation. An innovative capability in terms of products, processes and organisation clearly determines a company's competitiveness. Important aspects in this regard are the spatial dimension, and the region as the level of action (e.g. Bathelt and Glückler, 2000; Hassink, 2001; Malecki, 2000; Sternberg, 2001; Boschma 2005). This paper attempts to widen the scope of previous analyses of the advantages of spatial proximity, to include environmental policy and management.

As already mentioned, Ökoprofit involves a range of actors, partly within the city or region and partly beyond. The latter encompasses e.g., the licensor (the city of Graz) and potentially the European Union, the federal government, as well as the federal states. The local actors are shown in a basic model (see Fig. 2): the city administration, the participating companies, the inhabitants (as voters, customers and neighbours of companies) and the consultants. Although the chamber of industry and commerce, the chamber of crafts, private initiatives and associations, etc. are not included in the basic model, they still have a role to play. The basic model also does not indicate that the municipality and companies are organisations with hugely different structures in their various departments.

Since they are the addressees of the Ökoprofit programme, the relationship of companies to other actors shall be analysed more closely. The Stakeholder-Approach of management theory can be particularly helpful here (Freeman, 1984, after Braun, 2003). Stakeholders are those actors who can influence the company directly or indirectly or who can be influenced by the company directly or indirectly. The theory states that the behaviour of companies is determined by a range of stakeholders, who however have varying degrees of power to influence companies, as Gröner und Zapf (1998, after Braun, 2002, p. 22) show. These are:

- supporting stakeholders, e.g. small shareholders, employees, associations, suppliers;
- demanding stakeholders e.g. entrepreneurs, shareholders, banks, customers;

- problematic stakeholders, e.g. legislators, administrations, the media, environmental organisations, citizens' initiatives;
- marginal stakeholders, e.g. political parties, residents, scientific institutions, competitors.

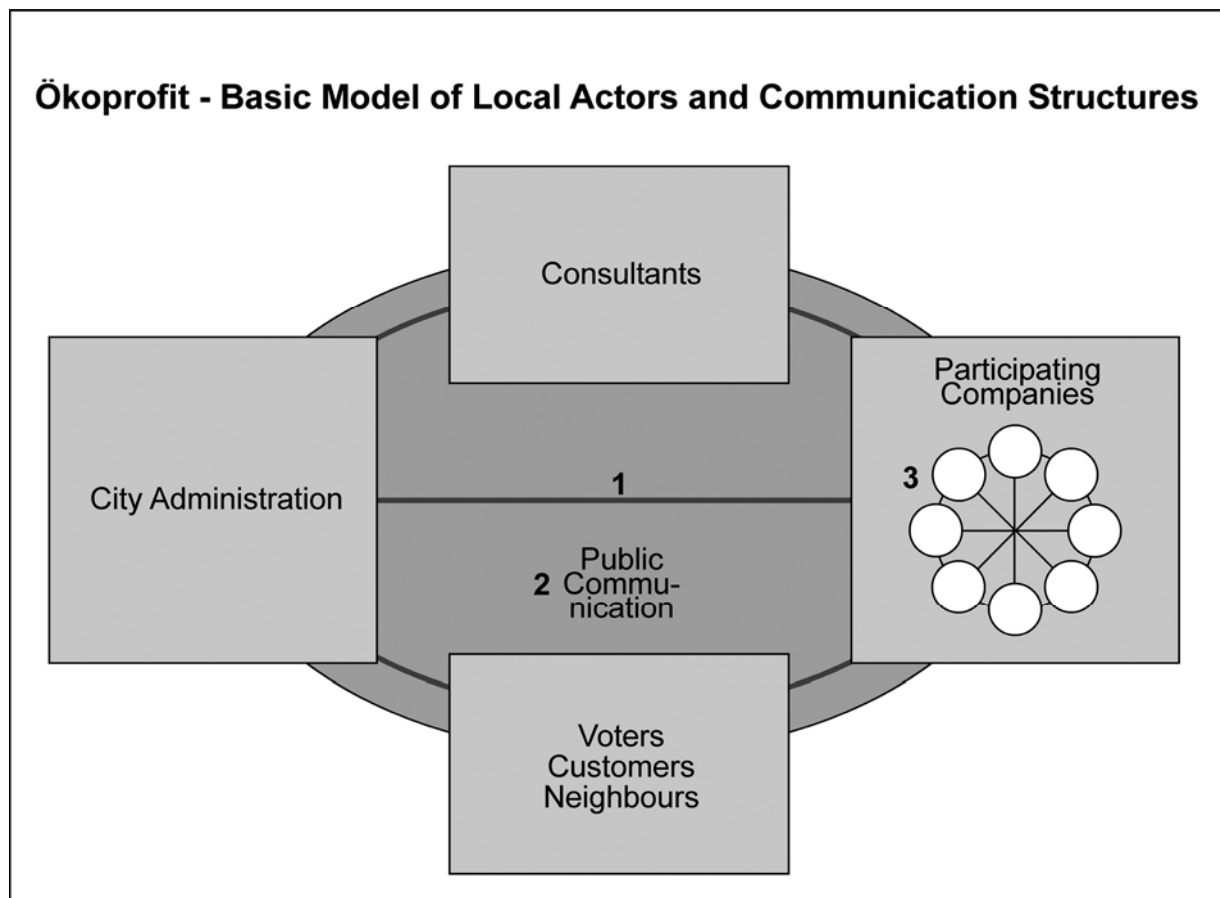


Figure 2: Ökoprofit – Basic model of local actors and communication structures (own compilation)

The analysis of the spatial factors of success assumes three different types of areas with potential importance in social interaction and communication. These are made possible by the spatial proximity of actors, provided the density of population is sufficiently high in a particular catchment area. The three types differ from one another in form and intensity of relationship. In the following, these three spatial factors are discussed in detail: the already existing close relationship between the city administration and companies, local public communication, and the structuring of participants into a single group.

## 3.2 Three Spatial Factors

### 3.2.1 Close Relationship Between City Administration and Companies

Neither the federal government nor the federal states can establish direct contact to individual companies on a large scale in order to motivate them to protect the environment and save resources. In towns and cities, however, it is not unusual that there are many direct contacts between the local authorities and companies – at local and regional level such contacts are much more likely (see 1 in Fig. 2). Networks emerge more easily, at least in the form of an awareness of and knowledge about one another (see e.g. Cooke and Morgan, 1993; Sternberg 1999). Granovetter (1973) highlights the “strength of weak ties”, meaning networks which arise through cooperation between actors in different

spheres (companies, local authorities, etc.). As already pointed out in connection with agglomeration economies, the possibility of face-to-face contact is an important advantage of spatial proximity (Tiebout after Lauschmann, 1976, p. 55).

The stakeholder analysis shows that municipalities are important for companies (“problematic stakeholders”). At least two basic sources of contact are obvious. One is the municipality’s issuing of permits and controlling of legal compliance, while the other stems from its interest in business development and work to support companies and improve general economic conditions. Strong relations and good communication can potentially lessen negative impacts while increasing positive impacts on companies.

SMEs are often sceptical when approached directly by consultants. However, if the consultancy is embedded in the Ökoprofit programme as offered by the municipality, then individual companies have greater faith in the underlying motivation and are reluctant to reject the offer. Thus the municipality is able to raise more interest and attention, at the same time as lowering barriers to acceptance. The company also has the chance of presenting itself in a favourable light. The practice of Ökoprofit shows that in order to decrease the municipality’s workload, consultants generally manage acquisition on its behalf. Of course this is at the expense of direct contact between municipality and companies (although the municipality can pass relevant knowledge to consultants). Consultants, however, possess an invaluable network of contacts. They may of course provide reassurance to companies by pointing out their mandate from the municipality.

### **3.2.2 Local Public Communication**

Addressing companies directly and working in a group are forms of (more or less) private communication. However, Ökoprofit also relies on communication to the general public, intended to reach all citizens and actors in the city or region (see (2) in Fig. 2, designating the entire oval).<sup>2</sup> They can receive the information in person, e.g. by listening to a speech or taking part in an event, or second-hand, e.g. by reading the local newspaper or talking with acquaintances.

Information enters the public sphere through the deliberate action of actors, e.g. public speeches, banners, press releases or advertisements, or through active media journalism on the lookout for interesting news. The end result is an emergent communication network (Haller, 2003, pp. 578-586; Imhoff, 2003, p. 203), providing all actors with a basis for discussion, the forming of opinions and decision-making on all public topics (Kösters, 2002, p. 213; Gisevius, 1994, pp. 94-97).

The implementation of Ökoprofit in a city or region is certainly not interesting for a national audience. However, it can be of sufficient interest for the geographically limited audience of local and regional actors. In the basic model of actors, the political heads of the city administration are particularly interested in addressing voters and other target groups like companies. Companies, being the focus of investigation here, are conversely interested in good relations with the city as a potential “controller” and supporter. They are also interested in good relationships with local inhabitants living beside company facilities, the customers of their products, and any other stakeholders. The local media are interested in selling their product, while at the same time dependent on getting information from the city administration, for example (Schleer, 2003, pp. 175 f.). Often they are supportive of positive city or regional development.

At least three aspects should be mentioned concerning the impact of public communication on the success of Ökoprofit. Communication in the form of newspaper articles or the public awarding of an Ökoprofit certificate, for example, can spread information about the

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<sup>2</sup> The notion of public communication refers to the German term “Öffentlichkeit” which does not seem to have a direct counterpart in the English language.

features of the programme to the addressees. Secondly, it conveys acknowledgement, recognition, and praise for the participating companies, thus improving their image and publicity while strengthening personal incentive. This is also important to attract would-be participants. Public communication can also put pressure on companies to remain in the programme to the end and successfully receive certification.

### **3.2.3 Working in a Group**

As already mentioned, companies participating in workshops are organised into a single group (see 3 in Fig. 2). There are sufficient potential companies (including SMEs) taking part in Ökoprofit to make this relatively easy to arrange. However, owing to the generally larger size of participating companies, this is not true of EMAS. From a financial point of view, the use of the group structure reduces significantly the costs per company of transferring information from consultants to companies. In theory, at least, the strategy can also support the functioning of Ökoprofit in other ways. The impact of a group structure is more usually a focus of sociology, psychology and educational theory than spatial research. Nevertheless, it perhaps is reasonable to indicate in this paper to what extent spatial proximity can support sustainable development by facilitating a group structure in workshops.

Generally, interaction in groups leads to a higher individual performance through emotional and intellectual stimulation, raised work ethic and competition (Schmerl, 1994). The group can facilitate the exchange of authentic experience, leading to more intensive learning. Workshops can serve as a kind of self-help group to deal jointly with the difficulties of implementing environmental measures in companies. Last but not least, working in groups with like-minded people can be fun – a not insignificant motivator to prolong participation until the final programme certification.

Lastly, two further aspects should be highlighted. As previously mentioned, one important advantage of spatial proximity is the possibility of face-to-face contact. Interestingly, a study in the field of environmental psychology has determined that face-to-face interaction has a powerful impact on the formation of values and intentions (Fuhrer et al. 1995). Moreover, in an integrated model of “responsible environmental action”, group processes play a decisive role in determining environmental awareness (Fuhrer and Wölfing, 1997, pp. 83-91).

In the final analysis, working in a group seems to enhance motivation and learning of participants, thus increasing environmental performance in the companies. Moreover, in the context of exchange of experience, learning in a group connects new knowledge with the person giving it. This can form the basis for longer lasting relationships, such as networks.

## **4 Ökoprofit Dresden 2007 – Empirical Findings**

Empirical basis of this paper is the Ökoprofit basic programme which was conducted for the first time in Dresden, the capital of Saxony/Germany. The opening event was held in March 2006, and the programme closed in June 2007. This Saxon pilot project received a subsidy from the INTERREG IIIC project *energy'regio (subproject ESME)*, which was financed by the European Union and Saxony's Ministry for the Environment and Agriculture. A group of 15 mainly small and medium-sized companies from various sectors took part in “Ökoprofit Dresden 2007”. The participants included a nursery with 10 employees, a machine construction company with 33 employees, a firm in the foodstuffs sector with a staff of 100, as well as a

hospital with 1600 employees. All companies completed the project successfully and were awarded the title "Ökoprofit company 2007".

First the background and the methodology of the investigation are given below. Then the results from Ökoprofit Dresden 2007 with regard to the attainment of ecological and economic goals are given. These are followed by a presentation of the spatial factors which contributed to the success of the Ökoprofit project.

## **4.1 Background and Methodology**

The IOER had previously gathered some experience of the Ökoprofit programme in the context of a separate research project, working together with Dresden's Chamber of Industry and Commerce (CIC).<sup>3</sup> A sub-project of the INTERREG Project "energy' regio" was advertised for tender, creating an opportunity to introduce Ökoprofit into Saxony for the first time. The CIC approached the IOER about becoming the project's academic partner. Then, together with the CIC, the City of Dresden and the firm Gertec Ltd., the IOER (as consortium leader) submitted a project application. Apart from introducing the Ökoprofit standard programme, a further goal was to develop and apply an additional energy module.

Additional to being in charge of the international cooperation, the one main task of the IOER was to carry out an evaluation of the Ökoprofit project to provide a basis for decision-making of policy-makers and interested actors regarding the future use of the programme in Saxony (Lintz and Nobis 2007). From a scientific point of view the analysis of the role of the proximity of local actors for the success of the programme Ökoprofit was the second main task.

As a member of the project group, the IOER was involved directly in all phases of project management. Furthermore, the scientific monitors took part in the kick-off and closing events, the preliminary discussions regarding the commission inspection, one of the 15 commission inspections, and several workshops. At the last of these workshops, all participating companies gave a short assessment of the entire project from their perspective. Participant and non-participant observation was supplemented by semi-structured interviews with the project partners, the consultants and selected companies, and the analysis of documents. Self-completion interviews after the last workshop formed the main empirical source regarding the companies.

## **4.2 Savings and Satisfaction with Ökoprofit**

### **4.2.1 Reduction of Environmental Pollution**

During the first year of ÖKOPROFIT, the 15 participating companies resolved to undertake 177 separate measures in various sectors of the environment; 55 percent of these have already been completed, while the remaining 45 percent have been planned and scheduled. These measures range from simple activities such as replacing lighting, to complex undertakings such as the conversion of a heating system in a production hall. The result of these implemented and planned measures is to reduce greatly the environmental load in the region (cf. Table 1).

Sizeable energy savings and reductions in emissions were achieved in the consumption of electricity and heat. The total saving for the 15 participating companies came to 3,106,000 kWh per year. The average energy saving was 7.3 percent, calculated from the energy consumption of the individual companies. The emission of carbon dioxide was reduced by around 1,100 t per year. The highest annual savings were 1,259,000

<sup>3</sup> See [www.ecoprofit-interreg3c.com](http://www.ecoprofit-interreg3c.com). Project duration: (2/2004-9/2006).

kWh for gas consumption and 786,000 kWh for electricity consumption. In addition, fuel consumption was lowered.

Environmental sector	Number of measures	Completed measures	Planned measures	Annual reduction in environmental load
Energy, emissions	99	51	48	3,106,000 kWh
Raw materials, waste	49	32	17	139 t
Water, wastewater	22	12	10	14,800 m <sup>3</sup>
Other	7	3	4	No exact figure
<b>Total</b>	<b>177</b>	<b>98</b>	<b>79</b>	

Table 1: Annual reduction in environmental load, Ökoprofit Dresden 2007

Many diverse measures were introduced to enable companies to reduce waste production. A consistent separation of waste proved crucial in reducing the amount of residual waste. Some technological and organisational changes helped avoiding the production of waste or facilitated its re-use. In total, the companies reduced waste production by 139 t per year.

Resource savings in the water sector were primarily achieved by increasing groundwater reserves through rainwater infiltration, and making reductions in wastewater production. However, the consumption of drinking water could also be sizeably reduced. The companies saved a total of 14,800 m<sup>3</sup> in water and wastewater per year. Furthermore, project participants were able to lower various environmental risks, such as hazardous substances. If one considers that these environmental benefits are not only permanent, but that new companies become involved with each Ökoprofit project, then the programme can have detectable positive repercussions on environmental quality at both local and global level.

#### 4.2.2 Company Satisfaction and Reduction of Operational Costs

The implemented measures have helped to save participating companies and businesses over 418,000 Euros per year (cf. Table 2). Energy savings contribute the largest share. A breakdown of the financial savings in terms of company size shows that participation in the ÖKOPROFIT project led to annual savings in operational costs as follows:

- under 50 employees, average of 4,720 euros (7 companies),
- 50 to 250 employees, average of 48,250 euros (6 companies), and
- more than 250 employees, average of 47,750 euros (2 companies).

In addition to these financial gains, the companies also enjoyed other savings which are harder to determine in monetary terms. Of particular value were, for example, improvements in legal security, reflected in reduced liability for risks.

Environmental sector	Annual cost savings in €
Energy, emissions	208,700
Raw materials, waste	66,100
Water, wastewater	95,400
Other	47,800
<b>Total</b>	<b>418,000</b>

Table 2: Annual cost savings, Ökoprofit Dresden 2007

As with previously evaluated projects (e.g. Martinuzzi, 2005), the participating companies were satisfied with the Ökoprofit programme. A survey showed that 14 of the 15 participants were either satisfied or highly satisfied. All companies, with one exception, said they would recommend the programme to others. In particular, the workshops and on-site consultancy were appreciated. The investigation showed that in almost all cases Ökoprofit helped to raise the priority given to the protection of resources and the environment. This was in part due to the formation of environmental teams, which are reported to be continued to act in most companies even after project end. Six companies have gone a step further and take part in the Ökoprofit club 2007/2008.

#### 4.2.3 Satisfaction of the Organisers

The City of Dresden was also satisfied with the Ökoprofit project. A representative of the city said in an interview that the benefits were higher than the costs highlighting among others the companies' satisfaction as well as the eco-economic effects and the improvement of the city's image. Already halfway through the project the city publicly recommended the programme to other municipalities. The best proof of the city's satisfaction is the fact that it already started a second Ökoprofit basic programme and, moreover, an Ökoprofit club. Also the chamber of industry and commerce in Dresden is highly satisfied. A CIC representative hopes that many municipalities and companies in the area of the chamber will follow suit.

### 4.3 Importance of Spatial Factors

After section 4.1 showed how the Ökoprofit programme can greatly contribute to attaining ecological and economic goals in municipalities, the focus now turns to the spatial factors influencing the programme's success. Up to now these have scarcely been the subject of scientific study (Lintz and Beier, 2006). Although it has not been possible to analyse empirically all individual aspects mentioned in section 3.2, examination of Dresden's experience with Ökoprofit shows that to succeed the programme utilises the advantages of spatial proximity of actors at the municipal level. As described in the following, there are at least three partially overlapping factors by means of which spatial proximity supports the effectiveness of Ökoprofit.

#### 4.3.1 Close Relationship Between City Administration and Companies

Municipalities often maintain close relations to local companies. Conversely, for the company the city is a relevant stakeholder. The theory posited here is that a company is reluctant to reject participation if the city (or in the case of Dresden, also a Chamber of Industry and Commerce) specifically suggests joining the Ökoprofit programme.

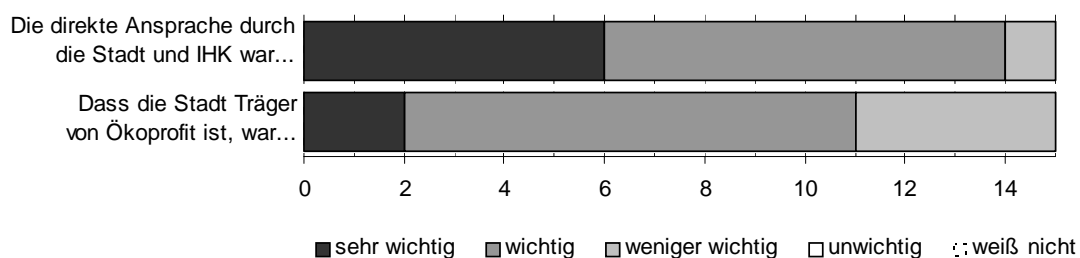


Figure 3: Significance of the City of Dresden as the organiser of Ökoprofit (own compilation)

The written survey clearly reinforces this argument directly: from the 15 companies, 14 found it important or very important when making their decision to participate that the initial approach had come from the city or the CIC (Fig. 3). For 11 companies the simple fact that this was a city-led project affected their decision. It was discussed that the companies did not appreciate being directly approached by consultants. The term “consultant allergy” was even used.

There are also more indirect arguments in favour of the close relationship proposition. Asked about the benefits of the new or deepened contacts which emerged in the Ökoprofit project 7 companies claimed high or very high benefits from the contacts to the city and 8 companies claimed high or very high benefits from the contacts to the ICC. The importance that companies place in the City of Dresden and the CIC is also obvious when one considers that 14 companies wish to maintain contacts with the city, while 12 are interested in continued contacts with the CIC.

### 4.3.2 Local Public Communication

The realisation of Ökoprofit’s public communication goals plays a large part in the programme’s design, as is shown by the opening and closing events and the requisite closing brochure. Theoretical considerations indicate that this effectiveness in public awareness has a motivating effect on participating companies.

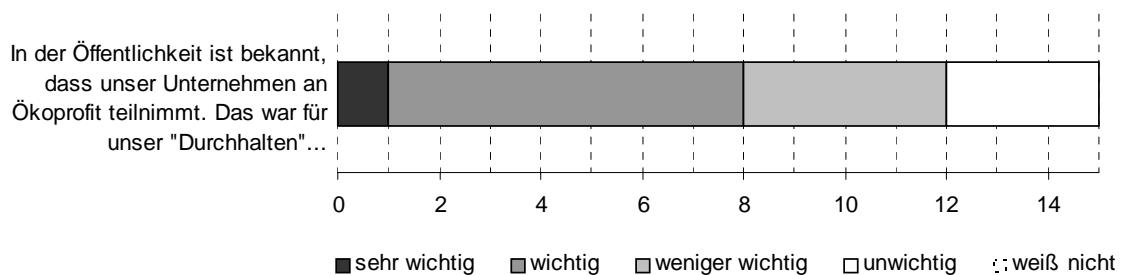


Figure 4: Significance of local public communication for keeping up (own compilation)

Ökoprofit in Dresden can certainly claim to have enjoyed good publicity. Apart from the kick-off/closing events and the final brochure, the project also received coverage in at least 13 newspapers with large circulations (local newspapers, official gazettes). Seven articles were published in journals or news letters. In total this comprised 13 larger and 7 smaller articles in the press. According to a written questionnaire, 8 companies were motivated by the press coverage to stay committed to the project and complete the final exam (Fig. 4). Eleven companies believe that their image has benefited from Ökoprofit. At least two companies have mentioned Ökoprofit in newspaper articles discussing other company matters, a clear indication of the desire to publicise participation in Ökoprofit.

### 4.3.3 Working in a Group

As Ökoprofit is also suitable for SMEs, there are sufficient participants in any large city to allow the formation of joint workshops (in Dresden: 8 dates). Participants form one group, allegedly leading to more benefits than just cost savings for each company. Theoretical considerations lead one to expect that interaction in groups can generate a higher individual performance through emotional and intellectual stimulation, raised work ethic and competition. The group can facilitate an exchange of authentic experience, leading to more intensive learning.

This theory is strongly supported by the facts in several ways. At the start of every workshop in Dresden’s Ökoprofit project, participants had to report on the progress made in particular activities. Participants were anxious to be able to show some achievement. If

no progress had been made, for instance because of an excessive workload, then this was obviously an embarrassment to the company.

The companies see great value in the exchange of experience. This was revealed by a written questionnaire that for 13 companies the exchange of experience amongst participants was either important or very important (Fig. 5). Many companies have also stated this conclusion repeatedly in discussions, whilst others have emphasised the positive stimulation that they received. The wide range of business sectors was seen as positive. Some companies expressed a wish that more time had been available for the exchange of experience.

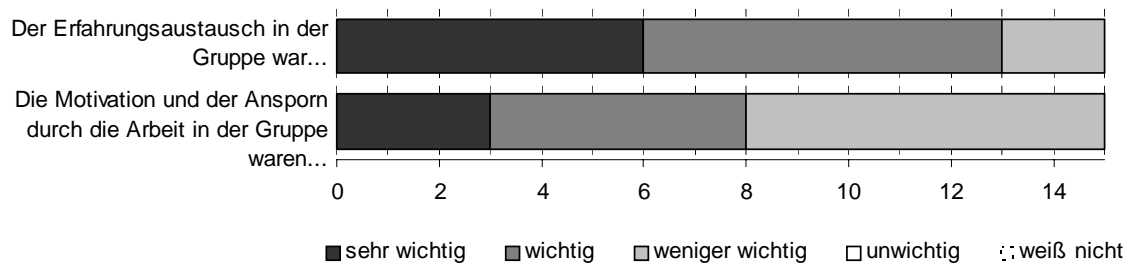


Figure 5: Significance of experience exchange and motivation in group (own compilation)

According to the written questionnaire, 8 participants found the group structure either important or very important for project motivation. Companies particularly emphasised the openness of discussions. All observations of the workshops clearly highlight the positive effects of the group dynamic. The general mood observed at the workshops leads one to believe that they were great fun for participants: laughter was not infrequent. The positive effect of working in a group can certainly be attributed to the good moderation. The moderator in this case placed great emphasis on an open exchange of experience and a positive atmosphere.

## 5 Conclusions

In the context of environmental governance, Ökoprofit is very interesting and instructive as a local and cooperative policy approach. Although this programme and its impacts have not yet been thoroughly investigated, it certainly can be called successful in terms of spread of uptake and the reported activation of companies to save resources and money. The programme's achievements were confirmed in the specific example of Dresden, where companies saw savings in resources and costs.

Against the background of the frequently heard (but little proved) thesis that the local and regional levels are highly important in achieving sustainable development, the question arises whether the Ökoprofit programme revealed specific potentials at these levels. Ökoprofit Dresden 2007 confirms the initial supposition. It has shown that the programme's success is highly dependent on the utilisation of the advantages offered by the spatial proximity of actors, advantages which can only be realised at the local or regional level: the close relationship between the city administration and companies, local public communication, and the structuring of participants into a single group. This lends support to the notion that the local and regional levels have specific contributions to make in sustainable development in the context of a complex system of governance. It would seem worthwhile to examine further the possibilities and limits of these contributions.

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