The role of scientific support in mediation processes: experiences from the VIE mediation

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1 INTRODUCTION

Due to decreasing flight prices and increasing living standard and mobility, air traffic grows continuously. The forecasts show an average annual growth rate of 5.6% for international passenger traffic between 2005 and 2009 (IATA 2005) and it is expected that the long-term growth trends will continue and that worldwide air traffic will double in the next 10 to 20 years (Short 2002, http://www.boeing.com). This trend can also be noticed in Austria: in 2005, flight movements exceeded the mark of 1 million movements for the first time and an annual growth of +11.6% is expected for 2005 which lies far above the European wide assumptions of 5-6% (der Standard, 7th/8th Dec. 2005). Airports have to react on these increasing demands and have to adapt their airport capacities. In many cases this requires enlargement of the airport and construction of additional runways. Airports are changing into new regional development poles, into "airport cities", which do not stand alone and detached from the airport surroundings (Güller and Güller 2003). Many studies prove that airports can be seen as economic growth engines for the entire airport region (e.g. York Aviation 2004, SIAA 2003, Blöchliger et al. 2004), but they also show negative impacts on the region. In particular, air traffic growth and enlargement of airports directly affect the abutters in the airport regions and often lead to conflicts. In order to guarantee the social acceptability of airports operation and the territorial insertion of airports, the need for other or alternative proposals and environmental actions is sought in all worldwide airports. […] It is about shaping actions types and modes allowing compromises between the two trends: air traffic growth and environmental concern/communities threats near major airports (Faburel and Mikiki 2004, 2). Thus, the big challenge for airports is to achieve a sustainable development in the entire airport region which means a balanced regional economic, ecological and social development.

This also requires participation as to achieve generally accepted and lasting solutions. Thus, participatory processes like mediation become increasingly important. However, participation lies not only in the interests of sustainable development but also in the interests of project operators who more and more frequently conduct mediation in the forefront of EIAs (environmental impact assessment) in order to accelerate the EIA procedure based on social acceptance. Mediation processes are led by mediators who help disputing parties to communicate with one another. Mediators are mainly responsible for process management and process control which is essential for facilitating and for accelerating the process of coming to a consensus-based conflict resolution. Sole process control may be sufficient for mediating family or workplace conflicts. Glasl (2004) distinguishes between three arenas of conflicts: micro-, meso- and macro-social conflicts. Whereas micro-social conflicts can be solved "face to face", meso-social conflicts between groups, departments or organisational units already need additional organisational and management competence. Macro-social conflicts affect a wider environment and often need additional expertises from various other fields. Macro-social conflicts can occur when large infrastructural projects are planned. In this case, many questions among the parties refer to potential impacts of the infrastructural project and to spatial, social, economic and environmental issues. Thus, for environmental mediations scientific support is essentially needed. Learning, knowledge transfer and knowledge building become key elements of mediation. Large mediation processes like environmental or land use mediations are fundamentally science-intensive and need to be assisted scientifically.

Many discussions and extensive literature on the role of mediators already exist. However, the role of scientific assistance in large environmental mediations is still rather unlighted. This paper describes the mediation process initiated by Vienna International Airport (www.viemediation.at) and focuses on the significance of scientific and technical information transfer. The VIE mediation demonstrates that a new role complementary to the role of the mediators emerged: an additional impartial party which is responsible for management and evaluation of the scientific and technical information and which integrates the information of separate expertises, translates the main findings to the participants and builds trust on the scientific results.

2 WHAT IS MEDIATION?

Mediation is an Alternative Dispute Resolution (ADR) process of exploring solutions and negotiating mutually acceptable resolutions. Mediation can be seen complementary to litigations. In the forefront of a legal process or in some cases even instead of it, mediation can lead to fair and reasonable solutions negotiated between the parties. In comparison to legal processes, conflicts are not delegated to be settled by judges but have to be carried out by the parties themselves (Heintel 2005). The parties have to deal with their conflicts, which can be a very challenging process. But finally achieved resolutions are perceived to be balanced and reasonable, which is not always the case with judgements. Today, medation is applied in many fields e.g. to solve family and working place disputes, but also public disputes. This paper concentrates on large and science-intensive mediations like in the case of the VIE mediation.

The reason for mediation is the existence of a conflict between two or more parties. Such conflicts are always closely connected with interests, emotions and relation-ships (cf. Zilleßen 1999). To achieve a robust and mutually acceptable solution, all levels of conflicts and all stakeholders have to be considered sufficiently. A basic requirement for mediation is that the parties participate voluntarily and are willing to find a common solution.

Generally speaking, the term "mediation" covers any activity in which an impartial third party facilitates an agreement on any matter in the common interest of the parties involved (http://en.wikipedia.org). Thus, the mediation process and negotiations are led by a third, neutral party: a mediator or a team of mediators. *The mediator has no authority to impose a settlement. His or her strength lies in the ability to assist the parties in resolving their own differences. The mediated dispute is settled when the parties themselves reach what they consider to be a workable solution* (Comick 1980, 27). Mediators do not advise those in dispute, but create a process through which the disputants find a resolution themselves. The first step for achieving this goal is that the parties talk to each other.

The negative feelings commonly associated with conflicts (Heintel 2005) often cause communication to stop or to become confrontational. Mediators shall help people to communicate with one another and shall avoid that negotiations reach a deadlock.

Mediation aims to establish a win-win-situation among the parties, so that sustainable solutions become more likely. The primary goal of mediation is to find a solution that all parties have consented to. If mediation takes place in the forefront of an EIA, it can not replace official environmental impact assessment procedure, but enables the ground to reach a generally accepted conflict resolution. Although the procedure of mediation is basically informal, the goal of a successful mediation is, that the parties decide to sign a legally binding contract. This helps to speed up the subsequent EIA procedure, because it is backed by a consensus among the signed parties.

3 THE VIE-MEDIATION

Lately, mediation procedures are also in Austria, Germany and Switzerland more and more often set up to resolve the dispute over airport enlargements (Vienna, Innsbruck, Frankfurt, Zurich). When Vienna International Airport (VIE) started to think about enlargement of the airport, citizen´s groups formed up and ran against it. Thus, VIE airport decided for a democratic experiment (VIEaktuell 2005, 12) and initiated a mediation process in 2000 aiming to achieve a robust solution with all participants. The VIE mediation was finished in 2005 and a mediation contract was signed which contains binding agreements between VIE airport and the mediation participants.

At the beginning of the VIE mediation 51 parties, at the end 54 parties engaged in the process (VIE airport, Austro Control, Austrian Airlines Group, Neighbourhood Advisory Committee, environmental advocacies of Vienna and Lower Austria, associations, chambers, representatives of the local companies and employees, Donau Auen National Park, regional and supra-regional citizen's groups, political parties and the states of Vienna and Lower Austria). The VIE-mediation process became the largest of Europe. The process was supported by a team of 3, at the end of 2 mediators and an advocate. Several surveys were carried out, e.g. on the topics of fauna and flora, emissions and immissions, traffic, economic effects, external risk and level of safety, soil consumption and change of landscape. Due to the huge amount of separate surveys and the complexity of issues and participants, systematisation and integration of the information became necessary. As mediation is always a learning process it requires to implement interdisciplinary studies far from sectoral approaches and sequential logics. Thus, a system-oriented approach was chosen and it was decided to apply the concept of sustainability. This required scientific support from an interdisciplinary team comprising experts from the fields of spatial and landscape planning, economics, biology, meteorology and geography. Thus, a research team from ARC systems research was assigned to assist the VIE mediation as an additional neutral party and to facilitate the solution finding process through their scientific support.

The ARC research team assisted the VIE mediation from 2001 to 2005 and provided scientific support throughout the entire process. Our team took an additional neutral position beside the mediation team. The task of the scientific team was not to advise the participants, but to systemise, prepare, evaluate, complete, summarize and integrate the existent scientific and technical information in order to help the participants to understand and assess the information and data. Decision making remained with the parties and was not made by the mediators or the scientific team. The ARC team was involved in the process in order to allow a systematic procedure and to transform information into knowledge.

3.1 Methodological approach: Sustainability model and scenarios

At the beginning of 2002, a separate working group was installed that engaged in the development of scenarios for the airport region. Together with the working group, the ARC team developed a sustainability model which integrated all essential ecologic, economic and social indicators. The aim of the model was to illustrate how different runway systems cause different amounts and routes of airport traffic and how this affects the regional development. The indicator-based model encompassed 21 topics and 71 indicators including ecological, economical and social aspects. Some indicators could be covered by scientific information and data available, others had to be completed by conducting own analyses. The ARC team evaluated, presented and discussed all indicators with the working group which was a crucial step towards generating knowledge and building trust among the participant.

The indicator-based sustainability model provided an essential basis for the development of scenarios. The scenario-technique was chosen, because scenarios are able to give a comprehensive picture of a potential future development. Complex issues can be presented in an easily understandable way and differences between scenarios become clearer. Eight Scenarios were developed for 2010 (date of completion of a third runway) and for 2020 (third runway in use for 10 years). Following the model, 71 indicators would have been to be prepared for each date – 2010 and 2020 – and for each scenario. This would have meant a flood of information and data and it would have been asked too much from the participants to cope with all this information. Thus, a two-stage procedure was applied to assess the indicators and to decide about the scenarios. First, a rough evaluation was carried out in order to identify those indictors that were critical for decision making. The parties agreed that it was not crucial to examine each indicator in detail and addressed the most fundamental "core" issues, in which the scenarios differed. The selected indicators were ranked as to their importance. A further aim of the rough evaluation was to classify these scenarios which were analysed in detail, which were postponed and which were not continued, because they had turned out to be infeasible.

The working group decided to choose two scenarios for further detailed analyses. This procedure allowed focussing on the most important issues and scenarios without neglecting the others. With the help of the two-stage procedure certain scenarios could be eliminated in the first stage and did not need to be investigated further. But they had been treated and discussed and this was most important for the participants. Trust in the selected scenarios had been built among the participants which was essential for finding a joint solution.

3.2 Scientific support of the learning process

Separate working groups were installed to increase the efficiency of the process. It has to be taken into account that the parties engaged in the process voluntarily and spent their leisure time for numerous meetings and sessions. Thus, it was necessary to design the process as efficiently as possible. Meetings of the forum board, which included all participating parties and encompassed over 50 members, took place regularly, but mainly for decision making. These decisions were based on the outcomes from the working groups. The working groups consisted of representatives of the different parties and thus represented the various interests of the participants, but did not encompass the entire forum. Work could be divided among the participants and discussing in smaller groups of approx. 15 people was easier, more open and more efficient. On the other hand, reference to the other members of the party became necessary and accordance of the larger group was important. Thus, the representatives reported to their colleagues about the results of their working group and got feedback from the others. The sustainability model and the development of the scenarios facilitated this transfer of information, because the process became more transparent and provided confidence in the representatives. Additionally, a process control group was established to coordinate communication between parties and forum board in agreement with the mediators.

Whereas mediators are expected to be process experts and conflict managers (Zilleßen 1998), the scientific team is intended to facilitate the technical learning process. Like mediators the scientific team is to remain neutral and assist the parties in finding resolution to their problems. Scientific and technical information often needs translation for lay users to be useful in dispute resolution and conflict management proceedings (Adler et al. 2000, 20). For decision making it is crucial that participants trust in the work of scientists. But often it is hard for laypersons to understand and assess surveys and expertises can be contradicting. Bringing in an acceptable third-party scientific team can restore confidence in scientific and technical surveys. In the case of the VIE mediation the participants were overwhelmed by numerous surveys. To systemise and integrate the flood of information, the ARC team developed a theory-based sustainability model and scenarios for the future development of the airport region. The most important contribution to facilitate the process was to transform the vast amount of separate studies into integrated understandable and tangible information and finally knowledge for the participating parties. Complex interdependencies within the airport region were transformed into comprehensible maps, figures and tables, which essentially helped to achieve a common understanding, trust and increasing willingness for finding solutions. GIS (Geographic Information System) was one methodology applied which was especially suited to visualise regional patterns and interaction. GIS-based maps allowed illustrating, comparing and discussing versions of different runway systems in an easily understandable way. It even enabled the participants to decide that some versions did not need to be examined in detail. Figure 1 illustrates the agreement between the mediation members that no new building land will be planned within the zone of 54dB and that the noise zones will not increase. Thus, GIS was a very helpful tool that facilitated the learning and decision making process significantly.

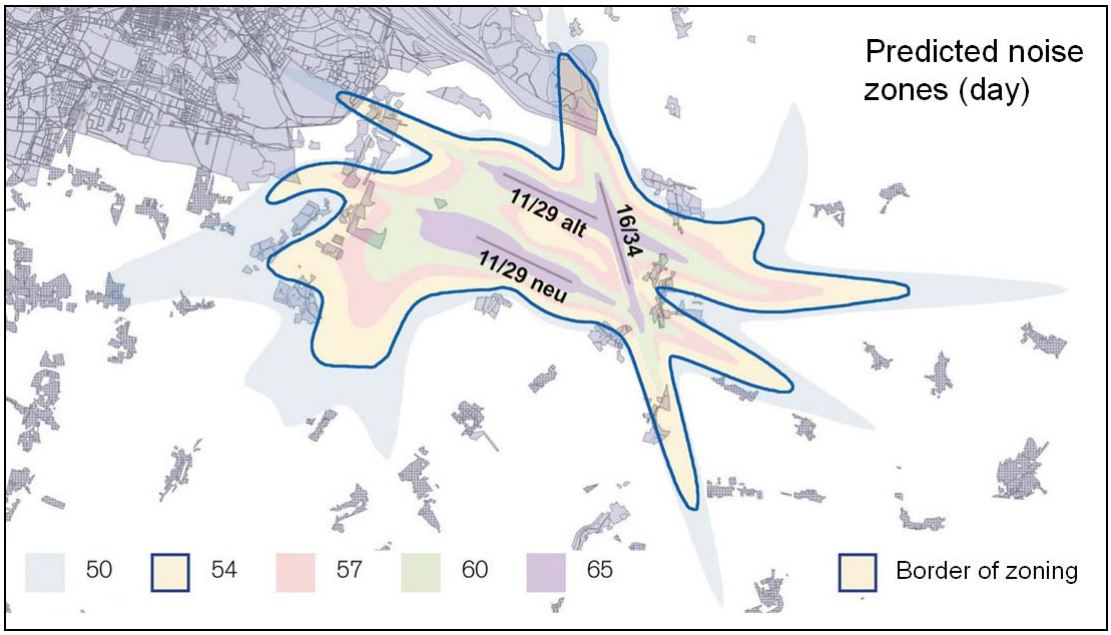

Figure 1: GIS-based map illustrating the future runway system
Source: Generalised zoning: Government of Lower Austria and City of Vienna; Noise zones: VIE airport

Through a joint learning process a comprehensible and trustful information basis could be created for all participants. Clearance about terms and definitions improved mutual understanding and efficiency of the discussions (Hesina and Tötzer 2003). It helped to avoid talking at crossed purposes and strengthened the confidence to address also more critical issues. Building knowledge and providing confidence in scientific information enabled the parties to supplement emotional and subjective estimations with objective facts and figures. This facilitated understanding and acceptance of the other's point of view and set the groundwork for finding a common solution.

4 CONCLUSIONS

Complex negotiation and learning processes like mediation of large infrastructure projects require methodological process support and control. This task lies with the mediators. But beside the methodological process support, scientific process assistance is needed to transform the flood of information and data into knowledge among the participants. Although decisions are left to the parties, foundations for making mutually acceptable decisions must be laid. In family or working place disputes the parties possess all the knowledge required to decide about potential ways out of crisis. But in large environmental mediation processes a further dimension has to be considered: the scientific dimension. Numerous separate surveys on different issues do not suffice to facilitate the solution finding process. It requires an additional step to transform this information into reliable knowledge on which decisions can be reached. It can not be demanded from the participants to become experts in every field. Besides, individual learning processes would consume enormous time and energy, but would not be able to build a joint knowledge basis. Thus, to accelerate and improve the process an additional facilitator is needed which holds the technical expertise to evaluate the surveys and to conduct own analyses, but which also possesses the interdisciplinary competency to integrate separate facts in models and scenarios. The scientific facilitator improves transparency and credibility in scientific issues. The VIE mediation example demonstrates that in large environmental mediation processes where economic, ecologic and social issues are addressed scientific support plays a crucial role. In the VIE mediation the interdisciplinary team of ARC systems research was in charge for the scientific support. Our experiences prove that an interdisciplinary scientific expert team complementary to the team of mediators significantly improves and accelerates the mediation procedure and can decisively contribute to the success of the mediation.

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