

# Exploitation Report Germany

## ***Description of practical application of research envisaged, including technological and economic potential***

The department for landuse planning and nature conservation is using the collated database and the developed methodologies for teaching the students in seminars and lectures about the possibilities of GIS and the significance of aesthetics and public preferences in landuse planning. The developed computer methods has been tested in co-operation with a landscape architect and they proved to be a practical tool for landscape planning in general. We demonstrated a way how computer techniques can be used as spatial decision support systems, which will sooner or later substitute conventional planning methods.

The research of the public preferences towards forest design measures has revealed the significance of landscape aesthetics in forest design, a point which has been often underestimated in Germany so far. Hence we think that our research has contributed to put more emphasis on aesthetics in landuse planning in future.

## ***Means of exploitation***

### **Postgraduate research**

Two doctoral dissertations are expected to be completed until the end of 1998. The titles of these dissertations are as following:

- **„Preferences and expectations of recreationists regarding landscape aesthetics of forests with special reference to various silvicultural management methods“ -**  
*Landschaftsästhetische Ansprüche und Erwartungen der Erholungssuchenden an den Wald unter besonderer Berücksichtigung verschiedener waldbaulicher Verfahren*  
(PhD thesis of Dipl.-Forstwirtin Petra Wild)
- **„The Potential of Geographic Information Systems (GIS) and New Digital Media in Landuse Planning“ -**  
*Möglichkeiten und Grenzen Geographischer Informationssysteme und neuer DigitalerMedien in der Landschaftsplanung*  
(PhD thesis of Forstassessor Dipl.-Forstwirt Markus Weidenbach)

A third doctoral dissertation is in preparation. It is part of a national project that has been launched in 1998 to assess the impact of structural change of arable land in South Bavaria. The applied methodology to research the public preferences corresponds to the FORAM project and comparable results are expected. The working title of the PhD thesis is:

- „**Scenarios for the development of agricultural landscapes and their acceptance - on the example of South Bavaria**“ - *Szenarien der Entwicklung von Agrarlandschaften und ihre Akzeptanz am Beispiel von Südbayern.*

(PhD thesis of Dipl.-Forstwirt Guenter Lindenau)

### **Training on newly developed technologies / practices**

A practical training seminar (thema *Landscape Aesthetics*) for students of forest science, biology, and geography has been carried out in Study Area III in the winter semester 1995/96. We researched methods to aesthetically assess the landscape by means of standard forms, public survey, and computer techniques. Some of the results of the public survey are on the internet: <http://www.lnn.forst.uni-muenchen.de/daten/foram/report96/alpsrvey.htm>

From November 1997 until February 1998 we conducted the students seminar „Landuse Planning by means of Geographic Information Systems“. The seminar participants worked on the basis of digital FORAM data of the Landscape Master Plan of *Burggen (Study Area III)*. We introduced the students by means of digital analysis to the field of modern landuse planning and we critically discussed the FORAM objectives. The seminar findings are published on the web under: <http://www.lnn.forst.uni-muenchen.de/daten/seminar98/index.htm>.

The collated data and methods will be a subject for future seminars and lectures at our department.

### **Research articles already published, in print or in preparation**

- Ammer, U., Detsch, R. 1996: Leitbild für die Vorrangfunktion Erholung im Alpenraum aus deutscher Sicht: Guidelines for recreation as the priority function in the Alps from the German point of view. With contributions of Weidenbach, M. & Wild, P. *Forstwissenschaftliches Centralblatt* 115: 213 - 222
- Weidenbach, M., Ammer, U. 1996: Aesthetics of Forested Landscapes. In: Zihlavnik, S. & Scheer, L. (eds.): *Application of Remote Sensing in Forestry: Proceedings*. Technical University in Zvolen, Faculty of Forestry, p. 163
- Weidenbach, M., Proebstl, U. 1997: Digitale Planung und Praesentation am Beispiel eines Landschaftsplanes im Bayerischen Voralpenraum. In: Dollinger, F. & Strobl, J. (eds.): *Salzburger Geographische Materialien* 26. (<http://www.lnn.forst.uni-muenchen.de/daten/foram/agit97>).
- Weidenbach, M., Proebstl, U. 1998: Multimedia GIS: A new Tool in Landuse Planning. *Forest & Landscape Research* XX: 1 - 16 (<http://www.lnn.forst.uni-muenchen.de/daten/foram/mmgis>).
- Weidenbach, M (1998): GIS and New Digital Media in Landscape Planning. *Fortswissenschaftliches Centralblatt*, in preparation.
- Wild, P. (1998): Landschaftaesthetische Ansprueche und Erwartungen der Erholungssuchenden an den Wald. *Fortswissenschaftliches Centralblatt*, in preparation.

## ***Dissemination activities other than publications which have been undertaken or are planned***

### **1994/95**

#### ***Attended meetings and conferences***

- Orientation meeting in Dublin with all participating countries (27<sup>th</sup> November to 4<sup>th</sup> December 1994)
- Several meetings with German Forest Authorities (Forstamt and Forstdirektion) in Freiburg, Todtmoos (Black Forest) and Schliersee (Bavarian Alps), Germany
- Meetings with the head of the Naturpark Obere Donau (Nature park *Upper Danube Valley*)
- ANL-conference (*Academy of Nature conservation and Landscape*, Munich): 'Landscape 2000' (2nd to 5th May 1995) in Germany
- 2<sup>nd</sup> FORAM-meeting in Munich, Germany (2nd to 10th July 1995)
- Symposium of the Bayerische Forstverein e. V. in Wuerzburg, Germany (27<sup>th</sup> to 29<sup>th</sup> September 1995)

#### ***Results of our studies have been disseminated on following occasions:***

In July 1995 a so called *home page* was created for the FORAM project and established on the *World Wide Web*. Since then it provides basic information about the project and links to the Scottish and Portuguese partner and results of the German team. During the project the home page had been updated frequently.

The internet address of the latest version is:

***<http://www.lnn.forst.uni-muenchen.de/daten/foram>***

### **1995/96**

#### ***Attended meetings and conferences***

- Information Meeting „ATKIS-Daten“ of State Survey Branch in Stuttgart/Germany, 16.01.1996
- 4<sup>th</sup> German ArcInfo User Conference in Freising/Germany, 11.03.96 - 13.03.96
- 3<sup>rd</sup> Project Meeting in Madrid/Spain, 24.05. - 01.06.1996
- GIS Conference "Angewandte Geographische Informationsverarbeitung" (AGIT, Applied Geographical Information Processing) in Salzburg/Austria, 03.07.96 - 05.07.96
- IUFRO Student Excursion 1996 „Land Use and Nature Protection in the Alps“ (International Excursion organised by the Faculty of Forestry, Ludwig-Maximilians-Universitaet Muenchen), 26.08. - 02.09.1996
- International Symposium „Application of Remote Sensing in Forestry“ at the Faculty of Forestry in Zvolen/Slovakia, 09. - 12. 09.1996 (see poster.doc)

***Results of our studies have been disseminated on following occasions:***

- At an International Meeting of the IUFRO subject group 6.01 (Leader Dr. Tuija Sievaenen, Finland) in August 1996 results of research in both Study Areas *Spitzingsee* and *Upper Danube Valley* have been presented multimedial with ArcView and a Digital Light Projector at the Faculty for Forest Science in Freising.
- At the International Symposium for "Application of Remote Sensing in Forestry" in Zvolen, Slovakia a poster with computer simulations and landscape models of Spitzingsee and Upper Danube Valley has been presented.
- At the FORAM Design Project Meeting in Madrid / Spain. The presented data is available on the internet: <http://www.lnn.forst.uni-muenchen.de/daten/foram/madrid96>

**1996/97**

***Attended meetings and conferences:***

- 5<sup>th</sup> German ArcInfo User Conference in Freising/Germany (March 1997)
- 4<sup>th</sup> FORAM-Project Meeting in Greece (February 1997)
- 5<sup>th</sup> FORAM-Project Meeting in Aberdeen/Scotland (June/July 1997)
- „Landscape Conservation and Tourism“: Symposium of the *Akademie für Natur und Umweltschutz* in Beuron (Study Area Upper Danube Valley) in June 1997.
- GIS - Symposium of the University of Freiburg and the *Akademie für Natur und Umweltschutz* in Karlsfeld (June 1997)
- GIS - Conference "Angewandte Geographische Informationsverarbeitung" (AGIT, Applied Geographical Information Processing) in Salzburg/Austria (4th.July 1997)
- Silvicultural Conference and Excursion of the ANW („Arbeitsgemeinschaft Naturgemaesse Waldwirtschaft in Ebrach, Germany (17th -18th October 1997)

***Results of our studies have been disseminated on following occasions:***

- We presented a paper at the GIS Symposium AGIT97 in Salzburg, Austria: „Digitale Planung und Präsentation am Beispiel eines Landschaftsplanes im Bayerischen Voralpenraum“ (<http://www.lnn.forst.uni-muenchen.de/daten/foram/agit97>).
- Multi Media ArcView projects of Beuron (Study Area Upper Danube Valley) and Burggen (Study Area Upper Danube Valley) has been presented to a public audience of GIS experts and nature conservationists in June 1997 in Karlsfeld (University of Freiburg and Akademie für Natur- und Umweltschutz Stuttgart) and in the Nature Park Centre in Beuron (Akademie für Natur- und Umweltschutz Stuttgart).
- Empirical methods of the public preference survey and group discussions as well as the GIS research were presented during a student excursion in the Upper Danube Valley which was organised by our department.
- From November 1997 to February 1998 we conducted a student seminar called „GIS and Landscape Design“, which is based on FORAM specific data and objectives.

## 1997/98

### *Attended meetings and conferences:*

- 6<sup>th</sup> FORAM meeting in Portugal from 24<sup>th</sup> to 30<sup>th</sup> January 1998
- 7<sup>th</sup> FORAM meeting in Ireland from 10<sup>th</sup> to 14<sup>th</sup> June 1998

### *Results of our studies have been disseminated on following occasions:*

- Two FORAM Internet sites produced by the German team are accepted for a "virtual session" which consists of remote presentations at the Conference of Resource Technology RT'98 from 8<sup>th</sup> - 12<sup>th</sup> June 1998 in Finland. These sites are:  
<http://www.lnn.forst.uni-muenchen.de/daten/foram/mmgis> and  
<http://www.lnn.forst.uni-muenchen.de/daten/foram/agit97>
- We presented the research findings of our work at the Weihenstephaner Kolloquium für Landschaftsoekologie, Geobotanik und Naturschutz on 27<sup>th</sup> November 1997. The digital presentation is available on the web:  
<http://www.lnn.forst.uni-muenchen.de/daten/foram/kolloq97/index.htm>
- During the 6<sup>th</sup> FORAM Project-Meeting in Portugal a seminar was organised by the Portuguese team on 29<sup>th</sup> January 1998 where we had the opportunity to give a lecture about „*The Role of Computer Technology in the FORAM Project*“. This presentation is also available on the web:  
<http://www.lnn.forst.uni-muenchen.de/daten/foram/aveiro98>
- Another presentation took part on 26<sup>th</sup> February 1998 for the women association of the political CSU party at the faculty of forest science in Freising
- On the 11<sup>th</sup> June at the seminar 'Forest Landscape and Design' in Dublin we presented the paper: '*Use of Advanced Computer Techniques in Forest Landscape Planning and Design*'. This paper is also published on the Internet:  
<http://www.lnn.forst.uni-muenchen.de/daten/foram/dublin98>
- On the 17<sup>th</sup> June at the GIS symposium of the Akademie für Natur- und Umweltschutz Baden-Wuerttemberg we presented the paper: '*Aufbau und Akzeptanz eines interaktiven GIS für die gemeindliche Landschaftsplanung*'
- A similiar presentation is foreseen in September for the 'Forstliche Hochschulwoche der Forstlichen Fakultät in Muenchen', a symposium of national reputation where the latest forest research in Germany will be published.

### ***Photographic record of the various stages of the project***

A photo album was collated and presented on the Internet:

<http://www.lnn.forst.uni-muenchen.de/daten/foram/album>