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1989 - 1991

Supplement to
Cartography in Switzerland 1987-1989

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Preface

At the occasion of the 14th International Technical Conference on Cartography of ICA in Budapest and of the Cartographic Congress in Vienna, held both in 1989, the Swiss Society of Cartography has presented to the participants an elaborate national report with 49 pages of text and 55 map sections. In view of the fact, that the Executive Committee decided that only one copy of the national report was to be distributed to each member nation at the General Assembly in Bournemouth, the Society decided to produce a supplement for the years 1989 - 1991 only.

Activities of the Swiss Society of Cartography

Membership and Committee

The Swiss Society of Cartography counts at the beginning of the year 1991 213 individual members and 28 collective members. Prof.Dipl.Ing. ErnstSpiess continued as president of the Society. Clemens-Maria Wäger, co-owner of a private cartographic firm in Frauenfeld, acts as secretary I. Bernhard Thomi from Orell Füssli Graphische Betriebe AG in Zurich is our secretary II and organizes the distribution of the "Kartographische Nachrichten", the official publication we share with the German and Austrian cartographers. Hans Haueter from Kümmert and Frey AG in Berne is our treasurer. Carmen Brun-Ganzer, Zug, Ulrich Baumgartner from the Federal Office of Topography in Wabern and Hanspeter Tschopp from the General Directorate of PTT in Berne complete our committee.

Professional Meetings

The following meetings of the Society can be reported in addition to those mentioned in our 1987 - 1989 report:

April 20, 1989
At this General Assembly in Solothurn the Society celebrated its 20th anniversary. After an excursion on the river Aare, sightseeing in Solothurn and a festive dinner there was an occasion to look back at past events and activities.

November 11, 1989
This meeting in Olten was devoted to a retrospection at the two technical conferences of Budapest and Vienna. Nine speakers presented their impressions, each of them concentrating on a specific topic.

April 28, 1990
The 21st General Assembly was held in Wabern. Besides the usual business, a motion concerning the general situation of the cartographers in our country and society was presented and discussed. The main actions to be taken concerned improvements in public relation activities and posteducation for the professional cartographers in the new field of computer-assisted cartography. The meeting was continued by an orientation on global positioning systems, a revolutionary new surveying method based on satellite geodesy.

November 10, 1990
This meeting was organized as a workshop on the use of personal computers in cartography. Six firms presented their systems and a wide range of applications. These systems were KARTOCAD, AUTOCAD, CARTOGRAFIX, MAPIX, TMS, a topographic mapping system for small scale maps and a TURBO-PASCAL-programme for the production of orienteering maps on PC-ATs. This workshop was very well received by our members.

November 22-25, 1990
38 members participated in this technical tour to Paris. The main attraction from a professional point of view was of course the visit offered by the Institut Géographique National. There was a lot of interest for the different areas we could look into, the production of orthophoto maps and other image processing applications and the methods for updating topographic maps by digital techniques. The Society is very grateful to the Directorate of the IGN for offering us this opportunity to gain new experiences and insights.

April 13, 1991
At this General Assembly in Lucerne the technical part was devoted to the giant project of the Federal Directorate of Cadastral Surveys, called "reform of the official cadastral surveys". The participants in a pilote project presented the data base established over a region of several fully digitized communities and a range of manifold applications that make use of these data. There was also an extensive discussion of the
links between these cadastral data and large scale cartography.

Educational Courses

In February / March 1990 a first workshop on information maps was organized by Kurt Bigler in collaboration with the School for Graphic Design in Berne. 14 members participated in this course that concentrated on the design of rather simple sketch maps for publications, newspapers etc. A further workshop on the same topic will be held early in 1992.

The professional education of cartographic apprentices in Switzerland is the responsibility of the Union of Swiss Printing Firms (VSD) and more directly of the firms that are training these young cartographers. However, the Society has always shown great interest in these matters. For the four-years apprenticeship a new model training plan has been elaborated and distributed. It became effective by July 1990. Further work on the conceptions for 11 main exercises has been nearly completed. These exercises are an essential part of the practical work during the four years. Furthermore a training course for experts that will hold the final examinations was organized in December 1990, so that now a new epoch in professional training of the cartographers has started. In near future additional emphasis will have to be given on computer-assisted techniques in the firms that train young cartographers.

Commissions and Working Groups

ICA Standing Commission on Education and Training
Swiss representative: Kurt Ficker has retired and is replaced ad interim by Prof.Ernst Spiess, Zurich

There was originally a definite interest of several institutions to participate in the project of a collection of exercises, first of all because we had been involved also in the preparation of the Basic Manual, second because the group of supervisors of our cartographic trainees had a similar project on hands for their own purposes. We hoped that these results might fulfill also the requests of the international group. This interest, however, decreased gradually because of complete lack of serious planning in the initial phase of the exercise project. When finally a new chairman gave new impulses, all good-will had gone. The Institute of Cartography of the ETH Zurich contributed finally six exercises.

It ought to be mentioned that participation in such ICA-Commission activities means a lot of work. 363 Illustrations have been prepared in the last years for the three projects, the Basic Manual, the Compendium and the exercises. The total amount of time spent for our collaboration is 11 man-months equal to $ 30 000. Discussions on the number of units by countries for the annual contributions to ICA should be considered also from the point of view of the amount of involvement in such common tasks.

ICA Standing Commission on the History
Swiss representative: Prof.Arthur Dürst, Zurich

The Swiss Society has a working group on history in cartography that operates in parallel to the ICA commission. A small group of members devoted to this subject has started in January 1990 a bi-annual journal, CARTOGRAPHICA HELVETICA. Chief-editor is Hans-Uli Feldmann, Murten. Four extraordinary well illustrated volumes have been published already up to middle of 1991. This undertaking has increased the activity of the working group considerably. A number of facsimile editions of historic maps have been supported or initiated, so e.g. 66 maps of the 17/18th century, assembled in the collection Schauenburg, 16 sheets of the Topographic Survey of the Canton of Zurich 1843-51, 32 printed maps based on the same survey, 4 sheets of the Topographic Map of the Canton Aargau, a facsimile of a hand-coloured version in four sheets of the Amsterdam edition (1720) of J.J. Scheuchzer's map. There was also an active participation in several international conferences on map history, in Oldenburg, in Paris, Uppsala, Stockholm and Dresden. several exhibitions of old maps have been organized by members of this group.

ICA Standing Commission on Advanced Technology
Swiss representative: Prof.Dr.Kurt Brassel, Zurich

From July 19 to 21 the Institute of Cartography of the ETH Zurich hosted a meeting of the Working Group Digital Cartographic Database Exchange Standards at
Rigi-Kaltbad. Under the chairmanship of Harold Moellering and with 10 participants from the countries that are most active in this field, intensive working sessions were held. Their goal was to finalize a publication on the standards in use in these countries.

Kurt Brassel organized at the University of Zurich the 4th International Symposium on Spatial Data Handling from July 23 to 27, 1990 in Zurich with well over 200 participants.

ICA Standing Commission on Map Production

Swiss representative: Prof. Ernst Spiess, Zurich

The Commission held a meeting in conjunction with a symposium on "Map Production Technologies" offered by INTERGRAPH in Huntsville (USA). Ernst Spiess gave a paper on integrated digital map production technology, presenting the system that has been installed by INTERGRAPH at the Institute of Cartography at the ETH Zurich as well as first experiences with the new vectorizing and map publishing software. Besides several other lectures, 11 workshops were offered, covering various aspects, such as e.g. scanners, vectorizing, pattern and character recognition, attributing vectorized data, GIS applications, data bank queries, overlay techniques, image processing, photo maps, combinations of vector and raster data, plotting with laserrasterplotters, functions for map generalization.

What the actual projects of the Commission are concerned, we are participating in the standardization of flow diagrams, having initialized this topic to some extent by the flow diagrams we created for the Compendium on Cartographic Techniques.

Working Groups on Geographic Names

Swiss representatives: Kurt Ficker has retired, Prof. Ernst Spiess continues to be a member of the StAGN

The German Standing Working Group on Geographic Names (StAGN) is independent from the Swiss Society of Cartography, but was established on an initiative of the German Society. It is concerned with the standardization of geographic names in the German language and has recently held its 89th meeting. Since its foundation a representative from the German speaking part of Switzerland was regularly invited to these meetings. The main items of the discussions are a common list of the German names of the states and gazetteers for countries and continents.

The StAGN has also a liaison function to the Dutch-German speaking Division of the United Nations Group of Experts on Geographic Names (UNEGN). Until the next UN-Conference 1992 in Cyprus this group is chaired by Ernst Spiess. It held meetings in Geneva in May 1989 and in Rapperswil in August 1990. The main items for discussions are the Glossary of Toponymic Terms, a list of exonyms and a proposal for a seminar in a developing country.

Publications of the Swiss Society of Cartography

The Society has prepared in the last 15 years a number of publications. Those still available are listed below. In November 1989 a new publication on cartographic generalization (Kartographisches Generalisieren) has been published. It contains a series of contributions by different authors to a seminar on generalization held in 1985 at the University of Zurich in cooperation with the Society. These papers have been amended and completed in the meantime. The volume covers theoretical aspects that were presented by Kurt Brassel and Rudolf Knöpfl, three contributions on generalization of topographic maps by Ulrich Baumgartner, Hans-Uli Feldmann and Heinz Leuzinger, on computer-assisted generalization by Kurt Brassel, Ernst Spiess and Pinhas Yoeli and on generalization of thematic maps by Ernst Spiess, Roland Kuster, Kurt Ficker, Walter Kirchhofer and Haruko Kishimoto. The volume contains 102 pages of German text and 204 illustrations.

These publications may be ordered at the following address:

Gert Schelling
SGK Publications
c/o Orell Füssli Graphische Betriebe AG
Postfach
CH - 8036 Zurich
<table>
<thead>
<tr>
<th>Nr.</th>
<th>Title</th>
<th>Price per copy</th>
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<tr>
<td>1</td>
<td>Kartographische Generalisierung, Topographische Karten</td>
<td>30.–</td>
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<tr>
<td>2</td>
<td>Cartographic Generalisation, Topographic Maps</td>
<td>35.–</td>
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<tr>
<td></td>
<td>2nd edition 1987. 62 pages, 150 fig., format 21 x 30 cm, loose sheets in envelope. [English translation of publication Nr.1]</td>
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<td>3</td>
<td>Thematische Kartographie – Graphik, Konzeption, Technik</td>
<td>30</td>
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<td></td>
<td>Tagungsband zur 2.Dreiländertagung 1978 in Bern, mit allen Fachvorträgen, Kartenbeispielen und Ausstellungskatalog.-Total 388 Seiten, Format 17 x 24 cm</td>
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<td>4</td>
<td>Kartographie in der Schweiz 1976-1980</td>
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<td></td>
<td>Landesbericht zur IKV-Konferenz in Tokio 1980. 87 Seiten, 24 Kartenbeispiele, 6 Skizzen / Übersichten, Format 17 x 24 cm</td>
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<td>5</td>
<td>Cartography in Switzerland 1976-1980</td>
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<td>National report for the ICA-Conference in Tokyo 1980, 91 pages, 25 map samples, 6 fig., format17 x 24 cm</td>
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<td>6</td>
<td>Kartographie der Gegenwart in der Schweiz 1984</td>
<td>25.–</td>
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<td>7</td>
<td>Cartography in Switzerland 1980-1984</td>
<td>30.–</td>
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<td></td>
<td>National report to the ICA-Conference 1984 in Perth, 84 pages, 48 map samples, format 21 x 30 cm. [English translation of publication Nr.6]</td>
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<td>8</td>
<td>Cartography in Switzerland 1984-1987</td>
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<td>National report to the ICA-Conference in Morelia 1987, 35 pages, 41 map samples, format 17 x 24 cm</td>
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<td></td>
<td>National report [English/deutsch] to the ICA-Conference 1989 in Budapest and to the Cartographic Congress in Vienna1989, 49 pages, 56 map samples, format 17 x 24 cm</td>
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<td>10</td>
<td>Kartographische Generalisierung</td>
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<td></td>
<td>1990, 102 Seiten, 204 Abb., 6 Kartenbeilagen, Format A4 (102 pages, 204 fig., 6 map samples, format 21 x 30 cm)</td>
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<td>Special offer: set of national reports (Nr.3,5,7,8,und 9)</td>
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Summary Reports from Official Organizations and Universities

Federal Office of Topography
Seftigenstrasse 264
CH - 3084 Wabern-Berne / SWITZERLAND

This official federal surveying and mapping organisation has approx. 150 collaborators and is active in various fields such as geodesy, surveying, levelling, photogrammetry and cartography. A new national geodetic GPS network has been designed and is presently measured. Other surveying activities concern precise levelling, determination of recent crustal movements and observations on power dams.

The main activity is in the mapping sector with 90 % of updating the National Topographic Map Series 1:25000 to 1:500000. In the years 1989-1991 approx. 180 maps have been revised and published in updated versions within the regular six years revision cycle (see also prospectus enclosed). One sheet at 1:50000 (No.249, Nauders) is completely new. Extensive pilot projects in updating by digital methods have been undertaken in the last two years. Three maps at 1:25000 have been revised on digital workstations. The colour separates of the former map have been scanned. Digital photogrammetric updates were added in vector format, laid over the raster data, precisely adjusted to the former map image, rasterized and retouched. The updated set of colour separation films was plotted on a SCITEX-laserrasterplotter.

10 % of the production are thematic maps. In the period 1989-1991 the following items were published:
- 9 topographic maps 1:50000 with ski routes
- 4 topographic maps 1:50000 with hiking routes
- map of Swiss museums
- official map for the "Weg der Schweiz", a hiking route around Lake Uri, built in commemoration of the 700th anniversary of the Confederation
- historical map *Switzerland 1291 - 1991*

Various maps were printed for other Departments of the Federal administration.

There is an increasing need for digital map data, which the Federal Office of Topography tries to meet within its restricted capacities in personal. A digital terrain model (DIKART) with meshes of 25 m covers now an area of 30 % of the country and high priority is attribut-ed to complete this project. In this context colour separation films of all sheets concerned have been scanned and are available on demand in raster format. Furthermore 4 sheets at 1:200000 are available in vector format, the sheet at 1:500000 in vector and raster format.

Swiss Federal Research Station for Agronomy
CH - 8046 Zurich / SWITZERLAND

The production of soil maps on the basis of the topographic maps at 1:25000 has continued. The following sheets have been published in the period 1989-1991:
- sheet 1050, Zurzach
- sheet 1091, Zurich
- sheet 1150, Lucerne

A number of sheets are in preparation:
- sheet 1048, Rheinfelden
- sheet 1049, Laufenburg
- sheet 1070, Baden

(see also prospectus enclosed). The organisation has recently started activities in digital mapping with ARC / INFO-software, mainly for the production of 1:5000 soil maps.

Swiss National Hydrological and Geological Survey, Section Geological Mapping
CH - 3003 Berne / SWITZERLAND

The Survey has recently concentrated its offices in Berne. The organization is mainly concerned with the publication of the Geological Atlas of Switzerland at 1:25000 scale. The section occupies six full time and approx. 70 external collaborators and commissioners that are involved in field surveys and in the preparation of the map manuscripts. The following sheets have been recently published:
- sheet 1129, Sursee (1990)
- sheet 1131, Zug (1990)

In addition the Survey publishes special and small scale geological maps. Cartographic and reproduction work on the basis of the map manuscripts is executed at the Federal Office of Topography and in two private firms, Orell Füssli Graphische Betriebe AG in Zurich and Kümmerly+Frey AG in Berne. In the private sector geological map production is increasingly making use of computer-assisted techniques.
Federal Directorate of Cadastral Survey
Eigerstrasse 65
CH - 3003 Beme / SWITZERLAND

The Directorate with its 15 officials has a supervising function for the official cadastral surveys, together with the 26 Cantonal Authorities for Cadastral Survey. The actual work, however, is done by 270 private and 23 official local offices. The survey data is reported on cadastral plans at 1:200 to 1:2000 scale and increasingly in numerical form. A recent giant project is called "reform of official cadastral surveys". It aims at an entire digitization of all cadastral data, retaining the private organization for these cadastral surveys. The land surveyors will be free in choosing their own surveying methods. Credits of more than 2.5 billion Swiss francs will be necessary to accomplish these goals. The digital data will be the basis of land information systems. A compulsory data catalogue has already been established. The use of these data will be subjected to a royalty system in order to activate the great public investment in these surveys. A common official interface for the exchange of cadastral data is currently developed.

A large scale map product of these cadastral surveys, apart of the cadastral plans, is the General Topographic Plan at 1:10000 or 1:5000 scale. It covers already 97% of the territory of the country. The Cantons are responsible for reproducing and updating these surveys. The intention of the reform is to gradually produce these plans on demand only and on the basis of the digital cadastral data and digital terrain models. The problems involved in such a change are studied by several groups.

Water and Energy Authority of the Canton of Berne, Section Geology
Reiterstrasse 11
CH - 3011 Berne / SWITZERLAND

The Cantonal Directorate of Constructions charged a private firm with a study on a Bernese GIS, called BEGIS. The intention is to secure a common digital basis for all thematic mapping activities for the Canton. The project to digitize the 35 sheets of the water protection maps at 1:25000 scale fits in these plans and nears completion. Tests with different software packages are currently on the way. But also work on conventional mapping went on. The following maps have been published in the period 1989-1991:

- Hydrogeological Map 1:25000 / 1:50000 of the region Oenztal-Saanetal-Worbental
- Hydrogeological Map 1:25000 / 1:50000 of the region Kiesental, Langetental, Rotbachtal
- General Map on Groundwater Protection Zones of the Canton Berne 1:100000
- Map on Groundwater Protection Zones 1:25000 of the Kiesental

The two sheets mentioned last have been produced using computer-assisted methods.

Atlas of Switzerland
Institute of Cartography
Swiss Federal Institute of Technology Zurich
ETH Hönggerberg
CH - 8093 Zurich / SWITZERLAND
and
Federal Office of Topography
Seftigenstrasse 264
CH - 3084 Wabern-Beme / SWITZERLAND

The 12th delivery of this national atlas has been published in January 1991. It contains the following 12 plates with 20 maps (see also prospectus enclosed):

- updated Topographic Map of Switzerland 1:500000, with woodland and hill shading and additional text on some facts about the country and the people
- revised Geotectonic and Geological Maps 1:500000, with an introduction in Geology of Switzerland by Rudolf Trümper
- Population development between 1900 and 1980, by communities, 1:500000
- Increase and decrease in population between 1960 and 1980, by communities, 1:500000
- Internal migration between 1975 and 1980, total and residual amounts and flux, in total 7 maps
- Age structure of the population 1980, by communities, 1:500000
- Structure of employment 1960 and 1980, by communities, 1:500000
- Daily commuters 1980, two maps 1:500000 with total number of persons involved and flux

At present work is going on for the 13th delivery that will contain several maps on industry and services, based on the data of the 1985 enterprise census. For several economic branches the change of the total number of people occupied between 1975 and 1985, a
period with considerable restructuration, will be shown by communities.

More and more use is made of the Cartographic Information System (KIS) of the Institute of Cartography at the ETH Zurich for the design and production of the atlas sheets. All diagram maps are constructed using a special application software that had to be developed and prepared for plotting on the laser-rasterplotter with the MapFinisher- and MapPublisher-software of INTERGRAPH.

Hydrological Atlas of Switzerland
Department of Geography
University of Berne
Hallerstrasse 12
CH - 3012 Berne / SWITZERLAND

The Department is in a general way involved in scientific work on space data in GIS-projects, in the production of thematic maps and atlases. In the period 1989-1991 work initiated on the Hydrological Atlas of Switzerland, a mandate of the Federal Government. The first issue with 17 plates will be published middle of 1992 (see prospectus enclosed). A second phase of this atlas is provided for the period 1992-1996. Coordination and financing of this project are under the auspices of the Swiss National Hydrological and Geological Survey. The work is supervised by an Atlas Commission. The hydrology group of the Department of Geography functions as project leader. It is supported by a number of external map authors for the individual maps. A contribution about the Hydrological Atlas of Switzerland will be incorporated in the Proceedings of the Bournemouth Conference.

A GIS-system is used for processing the extensive amount of spatial data available for hydrological purposes (ORL hectar-grid with land use data, digital terrain model RIMINI etc.). With ARC / INFO- and SPANS-software attempts are made to compile maps, graphs and tables and integrate them in a common layout, as e.g. that of an atlas sheet.

Atlas du bassin genevois et de la région témanique
Department of Geography
University of Geneva
7, route de Drize
CH - 1227 Carouge-Geneva / SWITZERLAND

The two collaborators of the Cartography Laboratory of the Department have elaborated under the guidance of Charles Hussy this regional atlas for the Canton of Geneva and the surrounding regions. This atlas is to be published in 1991. Collaboration was received from authors of the adjoining French border area. The atlas will have 60 maps and 45 pages of text. Another project, an Atlas of Lake Geneva, has started 1990 and is supposed to be published in 1993. It is planned that the laboratory will in future participate also in the GIS of Geneva (Système Genevois d'informatique sur le Territoire, SITG). The infrastructure of the laboratory includes AUTODIGIT, a system by Edigraphie Maromme, France, for digitizing maps automatically. The graphic output is produced on a Postscript Colour Offset Flash-system at X-Pose in Geneva.

Institute of Cartography
Swiss Federal Institute of Technology Zurich (ETH Zurich)
ETH Hönggerberg
CH - 8093 Zurich / SWITZERLAND

The Institute of cartography is involved in cartographic education and research and offers services in pretentious mapping projects. The courses are arranged in a complete curriculum in cartography, concentrating on graphics, design and technology, including computer-assisted techniques. These courses are a complement with compulsory and optional parts in the curriculums for surveying engineers and geographers. This arrangement lends itself also for individual studies in cartography, an opportunity that has been taken by a number of students of other universities and of foreign countries. Typically these courses consist of a large amount of practical work.

The Institute (Head: Prof. Ernst Spiess) has a mandate of the Federal Government for the editorial work of the thematic national atlas (Atlas of Switzerland), but also of the 26 Cantonal Ministers of Education for the Swiss school atlas (Schweizer Weltatlas / Atlas
mondial suisse / Atlante mondiale svizzero). The first one has been discussed above under its own headline. The school atlas project involves the preparation of an entirely new edition of this atlas with a long tradition. Design and compilation for the 350 maps is nearing completion. The cartographic work, reproduction and printing is commissioned to Orell Füssli Graphic Arts Ltd. in Zurich. The design of these series of atlas maps has a quite positive impact on our educational and research programme.

In 1980 a network of six INTERGRAPH workstations, including digitizers, a scanner, a server and a laserra-rasterplotter OPTRONICS 5040 has been installed. 37 software packages provide a wide variety of cartographic functions and allow for the compilation and production of various types of maps. Making use of this Cartographic Information System (KIS) became also part of the educational programme. After the initial training phase the six collaborators, who are operating the system, started with a number of projects and accompanied student projects. The following is an enumeration of some of them:

- diagram maps on the basis of statistical data for student exercises and national atlas maps; for this purpose own application programmes had to be written.
- hill shading map with hypsometric tints
- photo map based on SPOT imagery and topographic maps
- cartographic output of GIS data, a pilot project for communities done in collaboration with the Department of Geography of the University of Basle
- land use and land use change on the basis of orthophotos and topographic maps
- pictorial symbolization for various items in economic maps, especially for the school atlas
- a variety of map projections for different applications
- vectorizing scanned topographic plans

The main direction of research is directed towards such applications in which vector and raster data have to be edited, combined and prepared for raster output. The Institute is equipped also with conventional reproduction facilities excluding only printing.

Department of Geography
University of Zurich (Ichel)
Winterthurerstrasse 190
CH - 8057 Zurich / SWITZERLAND

The Department of Geography of the University of Zurich supports teaching and research programmes in Geographical Information Analysis and Remote Sensing which have close links to cartography. Cartography is taught at the base level. Courses offered at advanced level include Geographic Information Systems, Computer Mapping, Special Topics in cartography and several courses in analogue and digital Remote Sensing. For advanced cartography courses the students are advised to participate in the training programme at the Institute of Cartography of the Swiss Federal Institute of Technology (ETH Zurich).

Research activities of the Department of Geography relate to map design, spatial modelling and visualization, Geographic Information Systems, air photo and satellite image mapping. They include projects of the department's staff, PhD and Master's theses, as well as development contracts with international, national and local agencies and private firms.

The Department has organized the 4th International Symposium on Spatial Data Handling in July 1990 and has participated in the organization of an International Seminar on Photogrammetry and GIS in April 1991 at the ETH Zurich.

The Department is equipped with advanced computer facilities. Hardware includes clusters of SUN workstations for GIS research, instruction and SAR radar research, a Macintosh teaching laboratory, mainframes at the University Computing Center (IBM, NAS), a DIPIX Image Processing System connected to a DEC/VAX mini computer, various workstations, terminals (TEKTRONIX) and several other peripherals. There are a number of software products in use including ARC/INFO, System 9 and MAP II.

In the Geographic Information Analysis / Cartography section (Prof. Dr. K. Brassel) the following cartography-related projects have been worked on:

- Computer-assisted modelling and display of spatial structures in the geosciences, including the following subtopics:
  - models and algorithms for surface interpolation
  - speleological data processing and mapping
– algorithms for labeling of contour lines
– development of prototype systems for interactive display and analysis of 3D-representations
– mapping models for decision support systems, AI approaches to computer mapping
– cartographic generalization
– cartographic and quantitative analyses of meteorologic variables (modelling of precipitation dynamics from weather radar data, design of an air pollution control network)
– preparation of a cancer atlas of Switzerland in cooperation with epidemiologists
– spatial analyses and mapping of retail distribution and public transportation in the Zurich metropolitan area
– mapping the distribution of the Romanche population

The Remote Sensing section (Prof. Dr. H.-Haefner and Prof. Dr. K. Itten) has been involved in the following cartography-related projects:
– mapping of forests using satellite multi-spectral scanner data and digital terrain models
– study of the potential use of satellite data for the periodical update of the Swiss agrarian census
– production of land use map series 1:100000 for Sri Lanka based on satellite data
– analysis and mapping of snow hydrology in the Himalaya (India)
– geocoding, mapping and analysis of SAR and optical remote sensing data
– 3D-visualization and animation of remote sensing data
– spatial analysis of snow melting in the Alps and the construction of avalanche danger maps
– inventories and mapping of desertification processes in the Swiss Alps (Malcantone)
– monitoring of ELA (equilibrium line altitude) and AAR (accumulation area ratio) of alpine glaciers
– mapping of ancient oases in Yemen with satellite data.

The Physical Geography section is producing a palaeo-ecological atlas of Switzerland (PD Dr. C. Burga), focusing on the vegetation history (woodland) since the last interglacial period.

Summary Reports from Private Cartographic Companies

Kümmerly + Frey AG
Hallerstrasse 6-10
CH - 3001 Berne / SWITZERLAND

The main seat of this geographic publishing and printing house is in Berne. Sister organizations have been established in Stuttgart, Paris and Vienna. The company occupies in total some 300 collaborators.

The main cartographic production of the firm lays in the field of thematic maps:
– world maps and maps of continents
– road maps and atlases
– hiking and bicycle maps
– school maps
– city and town plans

The company offers cartographic products made on purpose using the existing base materials of the publishing house. A variety of services in digital cartography include topics like planning, surveying and mapping, geology, geography, transportation and traffic.

Kümmerly + Frey has published in the period 1989-1991 the following maps:
– 25 hiking and bicycle maps 1:60 000
– 3 maps as a complement of the series on road maps for Germany 1:250000, covering the former GDR
– 8 regional maps of the United States 1:350000 up to 1:1 million
– 20 maps on congested settlement areas in Germany 1:80000

The company is engaged since many years in computer-assisted map production with a SCITEX-scanning-, editing- and plotting-system. New systems that allow also for GIS-applications are currently developed and installed. Digital data are edited and refined on demand and marketed as well in digital form along with mapping contracts.

Orell Füssli Graphic Arts Ltd.
Dietzingerstrasse 3
P.O.Box
CH - 8036 Zurich / SWITZERLAND

The cartography department with its 35 employees is integrated within the printing sector, which itself is part
of one of the oldest German-speaking enterprises of the graphic branch.

The experience of well-trained specialists assures the production of maps demanding a high standard, with emphasis on customer specified thematic maps. After the introduction of state-of-the-art computer-assisted methods, the available know-how was further extended and productivity improved.

During the reporting period 1989-1991 the following maps among others were produced:

- 3 sheets of the Geological Atlas of Switzerland 1:25000
- 1 sheet of the Hydrogeological Atlas of Switzerland 1:100000
- 3 soil maps 1:5000
- 1 regional transport map
- 6 hiking maps
- 1 public transport schematic map
- 5 town maps and town map revisions

The ongoing major projects include the production of the Swiss school atlas for which 70 % of the cartographic work is now complete, and also the Language Atlas of Vorarlberg, of which three additional deliveries could be processed so that volume I is now complete.

Based on major investments, the computer-assisted cartography (CAC) facility was enlarged. After an intensive employee training period the system became productive in 1991. At present the ongoing production is supported by the CAC-system and the range of products was extended to new types of maps and the construction of spatial databases.

We would like to focus on a public transport schematic map, which was entirely produced with computer-assistance. An extensive generalization of the related town map served as background. It was distorted in order to emphasize the town centre. Using the installed Geographic Information System software, all local transport routes together with their stops and additional information such as the location of public institutions were recorded. Based on this the revision can be carried out and printed very cheaply in different scales and formats.

Orell Füssli is the first commercial user of INTERGRAPH mapping software in Switzerland. This software enables the complete production of a map, from data capture to raster-plotting of print ready films, on the computer-system. The necessary hardware includes a large format OPTRONICS 5040 Scanner/Plotter, two series 6000 workstations and two PCs. The system is used also for scanning, vectorization and rasterplotting.

At Orell Füssli the focus of cartographic production will, in parallel to the extension of the CAC-system, be shifted more and more towards digital cartography, opening up new market sectors and improving flexibility in traditional areas.

Zelchentechnik + Kartographie
Anderhub AG
Feldhausstrasse 9
CH - 6274 Eschenbach LU / Switzerland

This firm is specialized on cadastral maps and thematic maps. Their equipment comprises classic cartographic workplaces, a dark room for handling offset films, preparing guide copies and proof prints.

In the period 1989–1991 the following maps have been produced on contract:

- 22 hydrogeological maps for the Canton Uri and for the NEAT-project
- 8 hydrogeological maps of the Kleine Emme
- several updates of maps of the Water Supply Atlas of Switzerland
- maps of water protection zones for different cantons

The two last items are successively transformed into digital form for GIS-applications.

Recently an INTERGRAPH-system 6240 has been installed with IRASB, IRASC, MGE, MGA and Informix software. This system is supposed to be extended and completed by ARC/INFO GIS software

Summary Reports from Commercial Firms for Digital Mapping

There is a wide range of hardware and software available in Switzerland for digital mapping. Most of them are concentrating on utilities, road and railway construction and cadastral surveys, but increasingly recommended also for GIS- and LIS-applications. The
following companies (and systems) have a considerable share on the market:

- Adasys AG, Zürich (Adalin)
- C-Plan AG, Muri near Berne (C-Plan)
- Intergraph (Schweiz) AG (MicroStation)
- Leica AG, Glattbrugg (INFOCAM)
- Prime Computer (Schweiz) AG (System 9)
- Siemens-Nixdorf Informationssysteme AG, Kloten (SICAD)
- STI strässle, Glattbrugg (GRADIS-UX)

A few of them only engage themselves in medium and small scale digital mapping. Furthermore there are a number of firms that offer consulting, design and installation of system configurations in this field. Others offer services in scanning, editing, image processing and plotting.

Several large public corporations have initialized giant projects in the last few years, as e.g. the Federal Railways with "Railway 2000" and NEAT, the new AlpineTransit Line and equally important the Federal Post and Telephone Company with GRAFICO. Many Cantons also have just started to set up their own GIS organization.

The following members of the Society have offered a short report:

**Solocad GIS & CAD Systems**

Bielstrasse 29

CH - 5242 Pieterlen / SWITZERLAND

This firm is marketing MAPIX, a software used as turnkey systems for GIS, based on digital raster graphics with user data overlays in vector graphics and implemented on IBM compatible PCs and UNIX workstations. The software is available in German, French and English.

In the last three years numerous maps have been scanned according to customer’s specifications and processed as raster data. Among other contracts, military, civil defense and PTT projects have been carried out.

MAPIX will be provided with the Dynamic Data Exchange-interface of WINDOWS 3, which allows for interactive operation with EXCEL or OMNIS or SUPERBASE 4, but also with a GPS-interface for navigation via Modem. There will be also a UNIX-version for SUN, XENIX and VAX machines.

**STI Strässle**

Technische Informationssysteme AG

Kanalstrasse 33

CH - 8152 Glattbrugg / SWITZERLAND

The company occupies more than 450 collaborators, approx. 50 in the GIS branch. Their GRADIS-UX product is a workstation-based Geographic Information System with integrated relational ORACLE databank. It allows for data capture, data management, data analysis and representation of spatial data bases and is used in the fields of energy supply and surveying and in community administrations.

A further step was the integration of a raster databank (IABG) that allows to digitize on the background of a raster image. Applications that became operational may be located in the areas of regional planning, land use zoning, mapping biotops, trees and greenland as well as in forestry.

**Trends for the Near Future**

The evolution of digital techniques in Switzerland will continue even in an accelerated mode. Large projects as the reform of the cadastral surveys and the creation of databases for railways, roads, telephone and many other fields have just been started. The back-log in the availability of basic digital data, large scale cadastral and small scale topographic on the other side might cause some delay in these activities. The serious lack of cartographers and draughtsmen makes this lacune even a more severe one. There is a certain fear that the urgent needs might be met by unqualified and intermediate technologies. Today GIS and LIS seem to be considered as a must for most Cantons and many communities. Data management and cartography on monitors and workstations play an increasing role. But as the large public most probably does neither want to miss the beloved paper map nor the map quality they are used to, map design and production on the base of digital data might become a critical path.

Ernst Spiess
Sicher ans Ziel mit Landeskarten


Kartenpreis Fr. 16.00

Eine Übersicht der Karten des Bundesamtes für Landestopographie
Stand April 1991

Bundesamt für Landestopographie
Seftigenstrasse 264
CH-3034 Wabern
Telefon 031/54 91 11
Telefax 031/54 94 59
Telex 912 860 topo ch

Ausschnitt aus der Skiroutenkarte 1:50'000, Blatt 2035 Wildstrubel. Diese Karten sind auf wasserfestes Syntolf-Papier gedruckt.
Die gesamte Schweiz im Massstab 1:50 000 auf 76 Kartenblättern. Für ausgedehnte Wandertouren und Planer geeignet.
Preis pro Kartenblatt Fr.9.00

Ausschnitt aus der Landeskarte 1:25 000, Blatt 1150 Luzern. 4 Kartenzentimeter entsprechen 1 km im Gelände.

Ausschnitt aus der Landeskarte 1:50 000, Blatt 235 Rotkreuz. 2 Kartenzentimeter entsprechen 1 km im Gelände.

Zusammensetzungen 1:25 000
2501 St. Gallen und Umgebung
2502 Bern und Umgebung
2504 Magadlenen–Maccot
2505 Basel und Umgebung
2507 Luzern und Umgebung
2508 Freiburg und Umgebung
2510 Luzern und Umgebung
2511 Luzern und Umgebung
2512 Flumserberge–Wallensee
2513 Fl:pointer:genburg–Wallensee
2514 Säntis–Churfirsten
2515 Zermatt–Zugspitze
2516 Aletschgebiet
2517 Rochers de Naye–Eiger

Zusammensetzungen 1:50 000
5001 Gotthard
5002 Chur–Arosa–Obersimmental–Saanen
5003 Mont Blanc–Grand Combin
5004 Berner Oberland
5005 Säntis–Zug
5006 Mattmark–Machabeli
5007 Locarno–Riviera
5008 Valsugana–Tirano–Südtirol
5009 Genfersee–Aargau
5010 Konstanz–Landschaftsflächen
5011 Zürich–Zug
5012 Berner Oberland–Aargau
5013 Oberengadin–Engadino–Rhaetia
5014 St. Gallen–Appenzell
5015 Toggenburg–St. Gallen Oberland
5016 Bern–Bernina
5017 Unterengadin–Engadino Rossa
5018 Innerboden–Thuner See
5019 Weisstannen–Oberargau
5020 Freiburg–Baden–Luzern
5021 Weinfelden–Bodensee

Blattübersicht 1:25 000
Blattübersicht 1:50 000

Von touristisch interessanten, vom normalen Blattschnitt aber ungünstig getrennten Regionen erstellt die Landestopographie Zusammensetzungen aus Teilen von 4 bis 6 Kartenblättern.
Kartenpreise Fr.16.50 (1:25 000), Fr.18.00 (1:50 000), Fr.19.50 (1:100 000)

Sämtliche Landeskarten – und die Zusammensetzungen – werden alle 6 Jahre auf der neuesten Stand gebracht. Der Nachführungs-
stand (d.h. das Jahr der Flug-
aufnahmen) ist auf dem Titelblatt und auf der Karteninnenseite unten links angegeben.
Die gesamte Schweiz im Massstab 1:100.000 auf 23 Kartenblättern. Diese detaillierte Übersichtskarte eignet sich für Autofahrer und Velotouren. Die wichtigsten Straßen sind farblich hervorgehoben.

Preis pro Kartenblatt Fr. 11.00

Ausschnitt aus der Landeskarte 1:100.000, Blatt 32 Beromünster. 1 Kartenzentimeter entspricht 1 km im Gelände.

Ausschnitt aus der Landeskarte 1:200.000, Blatt 2 (Nordost Viertel). 1 Kartenzentimeter entspricht 2 km im Gelände.

Ausschnitt aus der Landeskarte 1:500.000. 1 Kartenzentimeter entspricht 5 km im Gelände.

Die gesamte Schweiz im Massstab 1:200.000 auf 4 Kartenblättern. Diese Übersichtskarte eignet sich ausgezeichnet für Ausfahrten mit Bahn oder Auto.

Preis pro Kartenblatt Fr. 12.00

Alle 4 Blätter zusammen in einer praktischen Plastikhülle sind für Fr. 38.00 erhältlich.


Ein Quartettspiel mit den Signaturen der Landeskarten 1:25 000 verhilft auf unterhaltsame Art zu (besseren) Kenntnissen des Karteninhaltes.

Ausschnitt aus dem Atlas der Schweiz, Tafel 63a: Dienstleistungen.

Ausschnitt aus der Luftfahrthinderniskarte 1:100 000, Blatt 32, Beromünster.

Ausschnitt aus der ICAO-Karte 1:500 000. Die Luftfahrthindernisse sind rot, die Flugsicherungsangaben violett eingebruckt.

Ausschnitt aus einer Detailkarte im Massstab 1:15 000 der Burgenkarte. Mit den beiliegenden Koordinatenmesser lassen sich die Standorte der gesuchten Objekte genau bestimmen.

Ausschnitt aus der Burgenkarte 1:200 000, Blatt 4. Auf dieser Überblickskarte sind die Schlösser, Ruinen und Wehranlagen violett eingebruckt.

In den Luftfahrthinderniskarten 1:100 000 sind alle gemeldeten Luftfahrthindernisse detailliert eingetragen. Diese Kartenserie wird in der Regel alle 2 Jahre neu überarbeitet. Kartenpreis Fr. 18.00

Die ICAO-Karte 1:500 000 ist die offizielle Luftfahrtkarte der Schweiz. Sie wird jedes Jahr neu überarbeitet. Kartenpreis Fr. 20.00

Die Museumskarte der Schweiz 1:300 000. Ein Muss für alle kulturell interessierten. Diese Karte zeigt alle kulturellen Sammelstätten der Schweiz und Liechtensteins. Zu dieser Karte gehört ein Begleitheft mit Museumsverzeichnis und Detailkarten. Kartenpreis Fr. 20.00

Schweizer Museumsführer mit Karte Fr. 38.00

Die Burgenkarten 1:200 000 werden in Zusammenarbeit mit dem Schweizerischen Burgenverein in 4 Blättern herausgegeben. Jede Karte wird ergänzt durch eine informative Broschüre mit Objektbeschreibungen und ein Heft mit Detailkarten. Kartenpreis Fr. 22.00

Die Kulturgüterkarte der Schweiz 1:500 000 zeigt die wichtigsten geschützten Objekte unserer Baukunst. Ein Begleitheft enthält ein nach Kantonen geordnetes Verzeichnis und Detailkarten. Kartenpreis Fr. 22.00

Das Bundesamt für Landestopographie gibt Aussicht über weitere, hier nicht erwähnte Karten sowie diverse Informationsblätter (gratis), die sich u.a. für den Karten- und Geographieunterricht eignen, wie z.B. Zeichenerklärung, Signaturen usw.
Questions:
Which are the dominant soil types in the Reuss Valley?
Which kinds of trees grow on these types of soil?

Answers:
See table 7a

---

Use table 1 (National Map 1: 500 000) or the transparent map of place names for locating something on the Landsat Imagery of Switzerland.
Question:
How close to your home was the nearest centre of an earthquake during the last 10 years?
Answer:
See table 10b.

Question:
In which areas since 1900 has Rhaeto-Romanic diminished from a main language to a language spoken only by a minority?
Answer:
See table 27b.
# Atlas of Switzerland

An atlas of thematic maps produced and revised by order of the Swiss Federal Council

Research done by renowned scientists from all over Switzerland

Preparation of the map originals by the editing office of the Swiss Federal Institute of Technology in Zurich

First edition: 1965–1978 (Editor-in-Chief: Prof. Dr. h. c. Eduard Imhof)

Second edition: since 1981 (Editor-in-Chief: Prof. Ernst Spies)

Cartographic preparation of the reproduction originals, photo-technical work, printing and publishing: Federal Office of Topography, CH-3084 Weberrn

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- 37 Urban architecture (1966)
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- 40 Urban settlement, examples (1972)
- 40a Urban settlement, text for table 40 (1972)
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- 43 Berne: Topography expansion and structures (1968)
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- 45 Zurich I: Topography and expansion (1968)
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### Landscapes of the Alps, Plateau and Jura
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- 81 Bernese Oberland, St. Gotthard and Lake of Lugano (1975)
- 82 Central Switzerland: Topography and geology (1977)
- 83 Northeast Switzerland and Grisons (1968)
- 84 Geneva basin and western Plateau (1966)
- 85 Middle and eastern Plateau (1974)
- 86 Jura (1972)

### Transparent maps of place-names (plastic foils) (1978)

Please note:
- Number in parenthesis = year of edition
- Names of tables printed in red = revision
- Names of tables underlined = new edition

The first edition of revised tables can be obtained as long as the supply lasts.

**Index of the subjects of those tables that will probably be published in the 13th delivery in 1993**

### Population (census of 1990)
- Density, increase and decrease, languages etc.

### Industry, manufacturing and services (census of employment of 1985)
- Number of people employed

Die Bodenkarte 1:25 000
- ist eine wichtige Grundlage für die Orts- und Regionalplanung (Erhaltung unserer fruchtbarsten Böden, bessere Zonenzuteilung);
- liefert Land- und Forstwirtschaft wertvolle Angaben für eine standortsgerechte Nutzung der Böden;
- dient der wissenschaftlichen Erforschung von Naturläumen.

Detaillierte Bodenkarten
(M1:10 000 bis 1:1000) sind erforderlich für Güterzusammenlegungen, Bodenverbesserungen, land- und forstwirtschaftliche Betriebsplanung und geben Hinweise auf eine umweltgerechte Düngung.

Les sols du pays sont aussi variés que ses paysages. Les caractéristiques des terrains peuvent changer sur de courtes distances. La carte des sols informe sur les propriétés et la distribution des sols.

L'utilisation d'une carte des sols dépend de son échelle.

La carte des sols au 1:25 000
- sert à la planification locale et régionale (maintien des meilleures terres, affectation de zones);
- fournit à l'agriculture et à la sylviculture les indications pour une bonne utilisation des sols;
- participe à la connaissance scientifique des espaces naturels.

Les cartes des sols détaillées
(1:10 000 à 1:1000) sont utilisées dans les remaniements parcellaires, les améliorations foncières, les plans d'exploitation des domaines agricoles et forestiers; elles donnent des indications utiles pour une fumure respectueuse de l'environnement.

Così come il nostro paesaggio, pure il nostro suolo è molto variato. Sovente le condizioni del terreno variano in uno spazio molto ristretto. La carta dei suoli fornisce informazioni sulle qualità e la distribuzione dei differenti suoli.

Le possibilità di utilizzazione di una carta dei suoli dipendono dalla scala in cui essa è stata disegnata.

La carta dei suoli 1:25 000
- è una base importante per la pianificazione locale e regionale (mantenimento dei nostri terreni più fertili, miglior distribuzione zonale);
- fornisce dati importanti all'economia agricola e forestale per uno sfruttamento del suolo adatto al luogo;
- serve all'esplorazione scientifica di ambienti naturali.

Carte dei suoli più dettagliate
(in scala 1:10 000 fino a 1:1000) sono necessarie per il raggruppamento terreni, la bonifica dei terreni e per la pianificazione delle aziende agricole e forestali. Inoltre forniscono indicazioni per una concimazione che tenga conto dell'ambiente.
FAP – Verzeichnis der Bodenkarten der Schweiz
Tableau des cartes des sols de la Suisse
Tavola delle carte dei suoli della Svizzera

<table>
<thead>
<tr>
<th>Massstab</th>
<th>Karten</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:500 000</td>
<td>Bodenkarte der Schweiz (Atlas der Schweiz, Blatt 7a)</td>
</tr>
<tr>
<td></td>
<td>Carte des sols de la Suisse (Atlas de la Suisse, feuille 7a)</td>
</tr>
<tr>
<td></td>
<td>Carta dei suoli della Svizzera (Atlante della Svizzera, foglio 7a)</td>
</tr>
<tr>
<td>1:300 000</td>
<td>Landwirtschaftliche Bodeneignungskarte der Schweiz</td>
</tr>
<tr>
<td></td>
<td>Carte des aptitudes culturales de sols de la Suisse</td>
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<tr>
<td></td>
<td>Carta delle attitudini agricole dei suoli svizzeri</td>
</tr>
<tr>
<td>1:200 000</td>
<td>Bodeneignungskarte der Schweiz</td>
</tr>
<tr>
<td>1:50 000</td>
<td>Carte des aptitudes des sols de la Suisse</td>
</tr>
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<td></td>
<td>Carta delle attitudini dei suoli svizzeri</td>
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<td>inkl. 1:50 000: Genève, Solothurn, Zürich</td>
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<tr>
<td>1:25 000</td>
<td>Bodenkarte der Schweiz (siehe unten)</td>
</tr>
<tr>
<td></td>
<td>Carte des sols de la Suisse (voir en dessous)</td>
</tr>
<tr>
<td></td>
<td>Carta dei suoli della Svizzera (vedi in calce)</td>
</tr>
<tr>
<td>1:10 000</td>
<td>Bodenkarten von diversen Gemeinden und Regionen</td>
</tr>
<tr>
<td>1:5 000</td>
<td>Cartes des sols de communes et régions diverses</td>
</tr>
<tr>
<td></td>
<td>Carte dei suoli di diversi communi e regioni</td>
</tr>
</tbody>
</table>

Bodenkarten der Schweiz / Cartes des sols de la Suisse / Carte dei suoli della Svizzera 1:25 000

publiziert/publié/pubblicato (Luzern, Zürich und Zurzach ab Ende 1987)
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Vor der Tagung wird kein weiteres Zirkular verschickt. Auskünfte erteilt:
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Geographisches institut der Universität Bern
Hallerstrasse 12
CH-3012 Bern
Tel. 031/631 88 74 oder 031/631 80 15
Fax 031/631 85 11

Organisation
Inscription et frais
La taxe d’inscription, destinée à couvrir nos frais, est de Fr. 20.– par personne, à verser au ccpp 36-15559-1 «Atlas hydrologique de la Suisse», au moyen du bulletin de versement ci-joint. Ce bulletin tient lieu de formule d’inscription.
Dernier délai pour les inscriptions
Le 15 septembre 1995
Lieu de la réunion
Université de Berne
Institut für exakte Wissenschaften, salle A6
Sdirerstrasse 5, 3012 Berne.
L’institut se trouve à l’est du bâtiment principal de l’Université (accès par les ascenseurs du parking, au fond du passage sous-voies de la gare CPF).

Comité d’organisation
Dr. R. Weingartner
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Dr. M. Spreafico
(Service hydrologique et géologique national)

Divers
La taxe d’inscription comprend le café de la pause. Le repas et les boissons seront réglés sur place, par les participants. Ceux-ci voudront bien, le cas échéant, s’occuper eux-mêmes de réserver leur chambre d’hôtel auprès de l’Office de tourisme de la ville de Berne, gare centrale, case postale, 3001 Berne, Tel. 031/311 66 11.

Il n’y aura pas d’autre circulaire ou rappel avant la réunion.
Pour tout renseignement:
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HYDROLOGISCHER ATLAS DER SCHWEIZ
ATLAS HYDROLOGIQUE DE LA SUISSE
ATLANTE IDROLOGICO DELLA SvIZZERA
HYDROLOGICAL ATLAS OF SWITZERLAND

Geographisches Institut der Universität Bern
Landeshydrologie und -geologie
Institut de géographie de l’Université de Berne
Service hydrologique et géologique national

Tagung
Resultat von Studien und Analysen im Rahmen des «Atlas hydrologischen Atlases der Schweiz» zu den Themen
Schnee und Oberflächengewässer
10. Oktober 1995 – nachmittags
Universität Bern
Institut für Exakte Wissenschaften, Hörsaal A6
Sdirerstrasse 5, 3012 Bern

Réunion
Résultats des études et analyses effectuées dans le cadre de la production de l’«Atlas hydrologique de la Suisse» aux sujets
Neige, cours d’eau et lacs
10 octobre 1995 – Après-midi
Université de Berne
Institut für Exakte Wissenschaften, salle A6
Sdirerstrasse 5, 3012 Berne
Ziel der Erung

Im Herbst 1995 wird die zweite Lieferung des «Hydrologischen Atlases der Schweiz» erscheinen. Tafeln über die Schneeverhältnisse sowie über qualitative und quantitative Aspekte der Oberflächenwässer bilden den thematischen Schwerpunkt dieser Lieferung.

Anlässlich der Tagung werden die neuen Tafeln durch die Autoren vorgestellt. Dabei stehen die methodischen Aspekte der Bearbeitung, die wissenschaftliche Bedeutung und Fragen der Anwendung in der Praxis im Mittelpunkt.

Die Tagung richtet sich vor allem an bisherige und zukünftige Anwender des Atlases: an Hydrologen und Hydrographen, an Vertreter fachverwandter Disziplinen, an Behörden, Politikerinnen und Politiker, an Lehrende und Lernende, alle, die am Wasser interessiert sind.

Patronat
Kommission des «Hydrologischen Atlases der Schweiz»
Arbeitsgruppe für operationselle Hydrologie
Schweizerische Gesellschaft für Hydrologie und Limnologie

But de la réunion


Au cours de cette réunion, les nouvelles planches seront présentées par leurs auteurs. Ils traiteront principalement des aspects méthodologiques de l’établissement des planches, de leur importance scientifique et de questions relatives à leur utilisation pratique.

La réunion est destinée avant tout aux utilisateurs et utilisatrices de l’Atlas, aux hydrologues, aux spécialistes des disciplines connexes, aux membres des autorités, aux représentants des milieux politiques, aux enseignants et, de façon générale, à tous ceux qui s’intéressent à l’eau.

Patronage
Commission de l’«Atlas hydrologique de la Suisse»
Groupe de travail pour l’hydrologie opérationnelle
Société suisse d’hydrologie et de limnologie

Programm - Programme

Tagung HADES 10. Oktober 1995
Réunion HADES du 10 octobre 1995

ab / dès 12.30
Bezug der Tagungsunterlagen / Remise de la documentation

Einleitung / Introduction

13.00 Begrüssung / Ouverture (M. Spreciozio, Programmlleiter / Directeur du programme)

Schnee / Neige

(Chef: Herbert Lang)

13.20 Räumlich-zeitliche Variationen des Wassertriebes der Schneedecke / Variations spatio-temporelles des équivalents en eau de la couche de neige (M. Rohrer, GI-ETH)
13.40 Extremer Schneedendenzuwachs / Accroissements extrêmes de la hauteur de neige (R. Meister, SLF/ENA)
14.00 Variationen der Schneegrenze / Variations de la limite de la neige (M. Baumgartner, GIUB)
14.20 Diskussion der Blocks «Schnee» / Discussion sur le thème de la «Neige»
14.35 Kaffeepause / Pause-café

Oberflächenwässer / Cours d’eau et lacs

(Chairman: Bruno Schädtler)

15.00 Verzeichnis der Fließgewässer und Seen nach dem Gewässerinformationssystem der Schweiz (GEWISS) / Le répertoire des cours d’eau et des lacs, dans le Système d’information hydrographique suisse GEWISS (A. Petrascheck, BWW/OFEE)
15.20 Entwicklung der Korrektionen in Fließgewässern und Seen / Développement des corrections des cours d’eau et des lacs (R. Kobl, EAWAG/ITAEP)
15.40 Hochwasserabfluss / Débits de crues (M. Spreciozio, LHG/SHGN)
16.00 Temperaturentwicklisse in Fließgewässern und Seen / Température des cours d’eau et des lacs (P. de Montmollin, LHG/SHGN)
16.20 Diskussion des Blocks «Oberflächenwässer» / Discussion sur le thème «Cours d’eau et lacs»

Schluss / Clôture

16.35 Schlusswort / Conclusions (Ch. Emmenegger, LHG/SHGN)
16.45 Schluss der Veranstaltung / Fin de la réunion
L’eau revêt une importance capitale pour la Suisse. Pluie, neige et glaciers, écoulement fluvial et évaporation, le cycle de l’eau marque de son empreinte le paysage. L’eau est un don du ciel, mais elle peut aussi devenir une calamité, lorsqu’elle déferle sous forme de crues dévastatrices. L’homme s’est ingénié à influencer le cours des rivières, de bien des façons et souvent sans mesure. Dans l’« Atlas hydrologique de la Suisse », on trouvera sous forme de cartes l’essentiel des connaissances actuelles en matière et leur signification à l’égard des influences souvent dangereuses que subjacent nos ressources en eau.

L’«Atlas hydrologique» est l’œuvre commune d’hydrologues suisses. Il a été rédigé à l’Institut de géographie de l’Université de Berne, avec le soutien du Service hydrologique et géologique national. L’impression en a été assurée par l’Office fédéral de topographie et la distribution par l’Office central fédéral des imprimés et du matériel. L’ouvrage s’adresse à un large public tourné vers les sciences naturelles, tout en constituant une référence fondamentale pour tout spécialiste ou praticien de l’hydrologie.

2.1 Carte de commande

Nous vous passons commande de la première livraison de l'«Atlas hydrologique de la Suisse» :

☐ Prix de souscription (jusqu'au 31 janvier 1992) sFr. 190.–
☐ Prix dès le 1er février 1992 sFr. 250.–

Nombre d'exemplaires

Adresse exacte

Date Signature

Une première livraison de l'«Atlas hydrologique de la Suisse» paraitra en 1992, avec 18 planches (voir la table des matières), d'autres livraisons étant déjà prévues. Les planches sont réunies dans un classeur (45,5x54,5 cm) sous étui de protection.

Prix de souscription de la première livraison particulièrement avantageux, pour toute commande passée avant le 31 janvier 1992. Il n'est pas possible d'obtenir des planches isolées.