

AREALIS on the Web

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Key words: Area management, Area information, Municipality planning, Information distribution.

SUMMARY

AREALIS is an initiative to establish a nation-wide Geographical Information System, making area, environment and planning data more accessible to the politicians, the public and the county and municipal administration. This again will lead to better area management and get an early warning of possible conflicting interests. Thematic information connected to map data gives new possibilities for comparing of area value and analysing of area conflicts. AREALIS uses internet for presentation of the programme and for distribution of messages and reports about both the programme and the data. A specific reference service is being offered, where coverage and regulation attached to the data sets are presented. Also data delivery will be done through internet, and simple services of GIS systems showing the different maps and geographical data sets will be offered.

I have presented the principles of AREALIS, its data elements, data management and distribution in papers to FIG Commission 3 meeting in Nairobi 2001 and ISTANBUL 2002. (Look to FIG website and references) More details on the technical structure and web solutions is presented by Roy Hellesjø Mellum at this session TS 13.4. Dissemination of Environmental data through the Web – Examples from Norway. In my Posting Paper here I will present some examples on practical local use of AREALIS and how some Municipalities is presenting area related information on the web or on their intranet.

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1. INTRODUCTION

The Norwegian Ministry of Environment initiated AREALIS in 1997. More than 10 Norwegian ministries and 20 of their agencies are involved in the programme, either as data suppliers or as potential users of the information accessible through AREALIS. 100 county agencies and 85 municipalities today take part. The aim is to develop relatively detailed data sets for all the 434 municipalities. Many datasets are drawn from different national mapping, management and planning agencies. Data are simplified, standardised and processed to be used by the administration in the municipalities. The principles of distribution are handled by one agency - Statens kartverk (Norwegian Mapping Authority) with the obligation to make the information easily available. The Norwegian Mapping Authority is co-ordinating the programme on behalf of the Ministry of Environment.

AREALIS is focused on specifications and standards, high diversity of topics, broad diversity of partners and users, joint management and the use of National Geographic Information Services (NGIS). AREALIS define the different environmental data sets of value in planning, and describe their content and structure. AREALIS find available existing data from different sectors, extract valuable parts of the geographical data and make it available as relevant information. Some data sets will have local coverage ending at municipal boundaries, while others have a nation-wide distribution.

The information is shared by the parties, and are also spread for external use. AREALIS data presents the value and interest of different sectors. Such information is essential for land use management in the context of sustainable land use.

2. LAND USE PLANNING

Land use planning and other kinds of planning effecting the environment are carried out at both national, regional and local levels. The central government works out overall objectives for a sustainable development, and uses different means to direct the development. The actual planning work and admissions for construction is however carried out at local level. By making existing environmental data and land use information from different sectors available at local and regional administrative levels (counties and municipalities) the program will stimulate the work for environmentally sound land use, sustainable development and rational planning. Minimising land use conflicts and resulting in shorter planning time and economic use of the planning force.

The planning processes also involve participation from the public. The ordinary involvement is organised through meetings and hearings. The aim of AREALIS is to meet the public, allow access to background information and welcome interactive communication on the web.

Necessary standards and models are developed in the AREALIS programme to help the end user in his use of the information and the new tools.

AREALIS is designed to solve some challenges concerning area management, and make planners and politicians able to cope with their day to day work on sustainable development planning together with their aim to carry out predictable planning operations. AREALIS is as such user-oriented, giving weight to the needs of local and regional planners and decision-makers.

In the following I will present some examples on practical local use of AREALIS and how some Municipalities is presenting area related information on the web or on their intranet.

3. LOCAL EXAMPLES

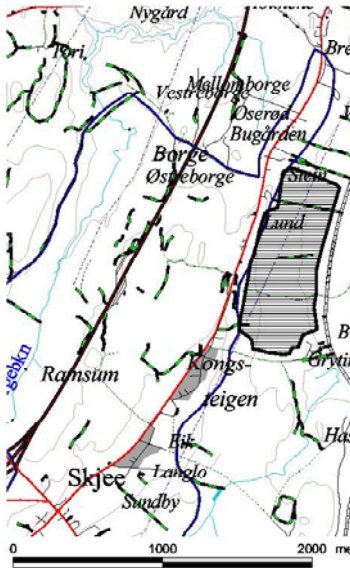
In the AREALIS program there has been distributed some examples that demonstrates the planning process with environment impact assessment based on available AREALIS information. The figure shows first the area to be considered and then the process of checking the impact towards various relevant area information.

As a politician in my home municipality I have experienced the use of AREALIS at local level. When we get a proposal on a detailed plan of an area, we can get a quick picture of the impact of the proposal, and we can give advice for changes to get the optimal solution with reduced conflicts between various interests. On the screen we get demonstration of the value of the farming and forestry area, water supply possibilities, traffic infrastructure, existing and potential playing areas, nature protected areas, cultural heritages etc. Up to now most of this information is only available on the in house server.

Some information on protected area can be found at Hole Municipality's web page www.hole.kommune.no/ More specific address gives the link to an overview of the protected areas; <http://hole.siden.as/index.php?cat=6110>

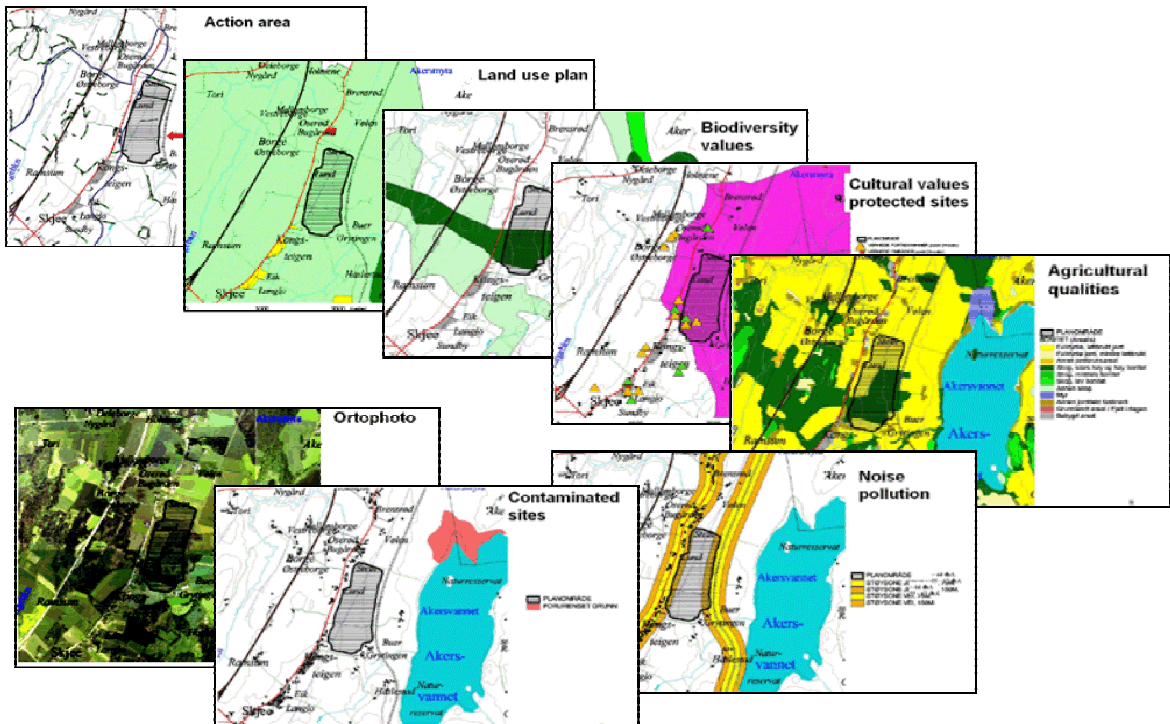
Follow the link to each one and you find a closer description of the area, what kind of protection and the value of the area. You also find a map showing the location and some pictures from the area.

It is a task to make most of the AREALIS data available on the web. However my own municipality is not in the front here. I refer to more links with examples in the reference list. Especially I can refer to Baerum Municipality that have a very good link to their geographic related information on reference map, administrative units, protected area, plan information and aerial photos. I have chosen some examples and I refer to the link <http://ww.baerum.kommune.no> and further to the tag "kartdata"

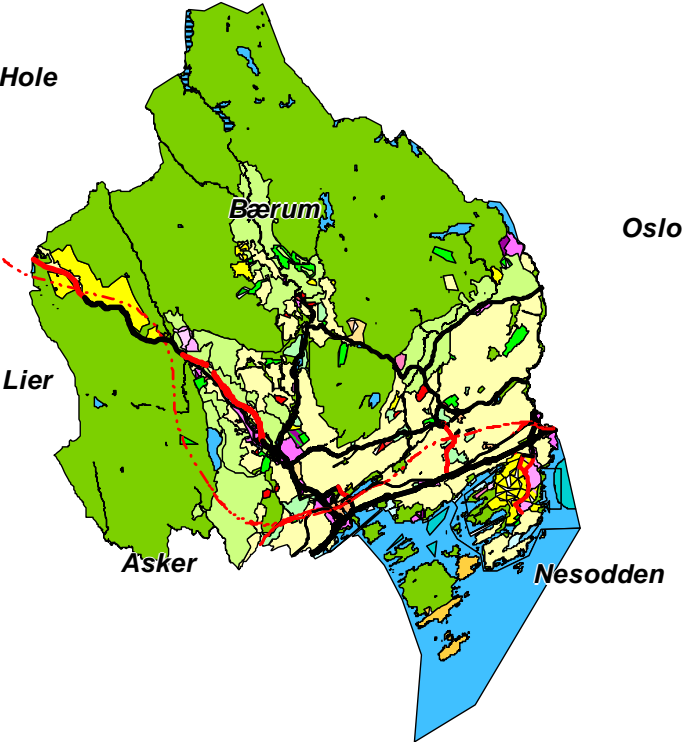


Planning process

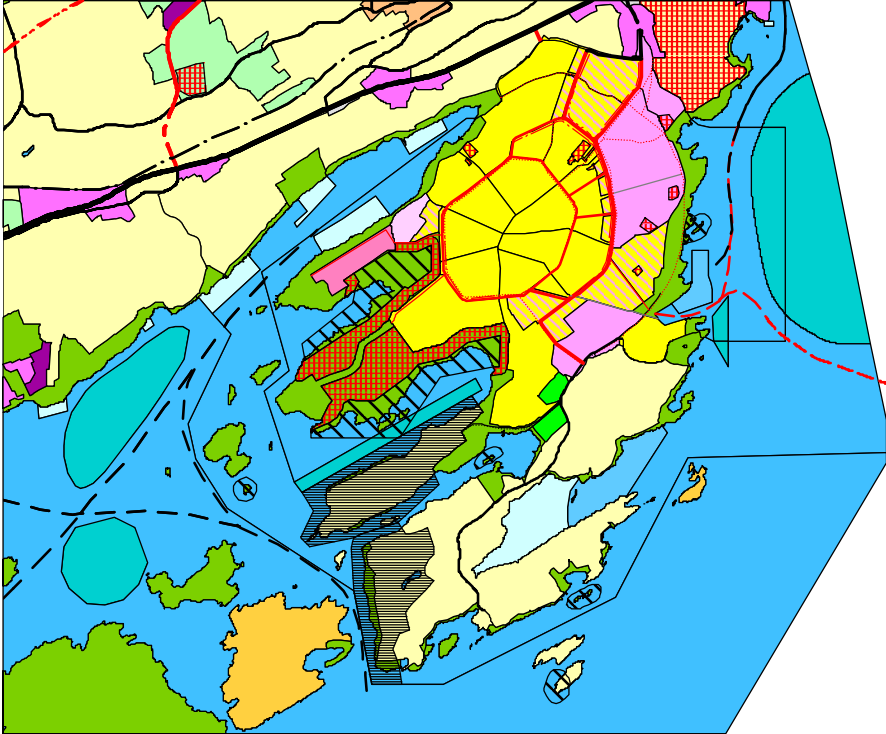
- 1: Mark the area to be considered.
2. Check the area to various datasets one at a time.
3. Conflicts must be assessed before final conclusions is made.



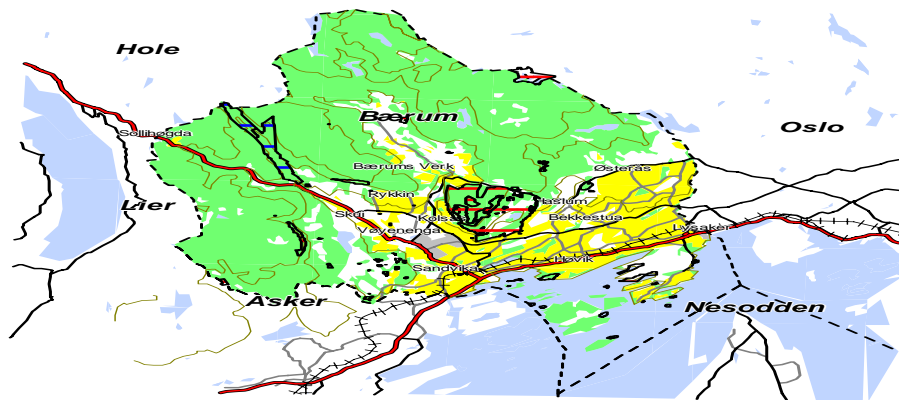
Area plans in Baerum Municipality



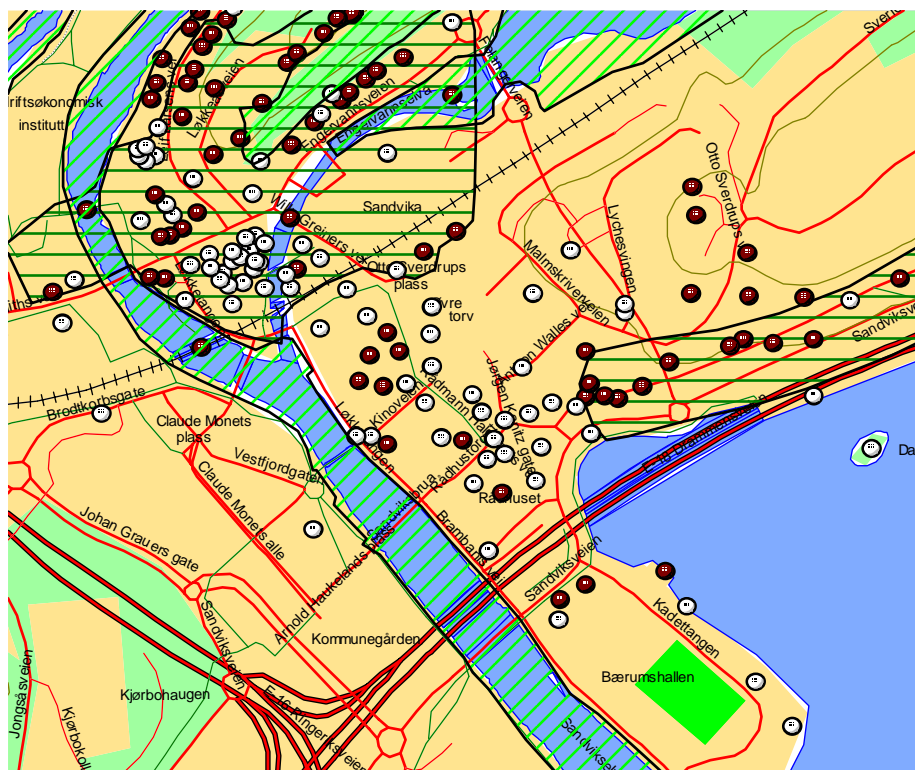
Detailed plans in Baerum Municipality



Environment information in Baerum Municipality



Cultural Heritage information in Baerum Municipality

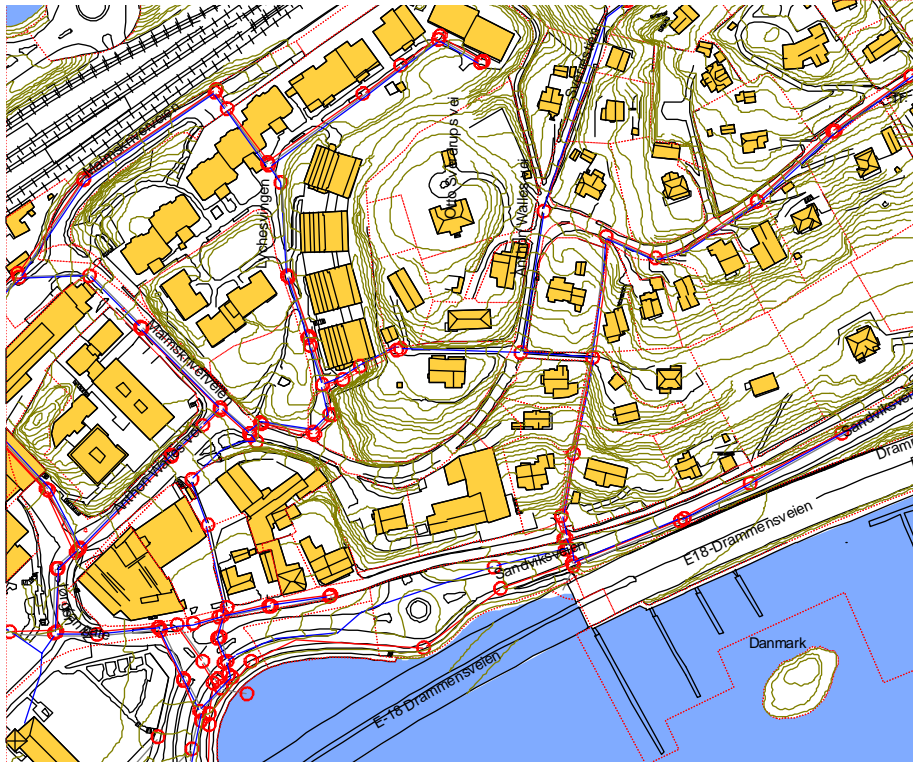


Most of this information is only presented with the text in Norwegian. For valuable information in English, I will draw your attention to the EU-program INSPIRE <http://www.ec-gis.org/inspire> This program has many parallels to the Norwegian AREALIS.

In the future we expect more and more information of this kind to be distributed via Internet. The geodata co-operation will be based on a strong co-operation and use of network technology. Basic data and the most important technical components are now available. However the communication speed is still a problem to achieve an efficient information exchange. Norwegian Mapping Authority, Norwegian Land Use Mapping Agency,

Norwegian Geologic Survey, Road Authority and Directorate of Nature conservation have been testing the benefit of high speed communication on distribution of geodata in a project called "Geodata on the web" This is further describes in Roy Mellums paper.

Reference Data/Basic Map of Baerum Municipality



Statens kartverks web site <http://www.statkart.no/arealis> is used as an important information channel in the AREALIS programme. Here the participants and potential users can find more information, guidelines, and reports on problems, ideas and corrections. They can also report to the co-ordination institution via this web site. Some examples presented on AREALIS website on solutions by using AREALIS in various counties;

- Map visualising recreation areas in Grimstad Municipality. The map diversifies between areas that are a part of the "Skjærgårdsparken" and areas owned by the City council.
- Map visualising conflicts in the areas within the 100-meter zone in Arendal municipality. The map visualises conflicts between area for housing and out-door recreation interests
- Map visualising areas planned for recreation houses in Tvedestrand municipality and recreation houses that are built in this areas. The map gives an indication on how well the restrictions in the plan have worked in the period.
- Map visualising a selection of items in Risørs coastal zone. The data sets established as a part of the coastal Zone project in Aust-Agder.

For some English information about AREALIS look to <http://www.statkart.no/arealis/hvaerarealis/arealisenglish.html> Another link that can give valuable relevant information in

English, I will draw your attention to the EU-program INSPIRE <http://www.ec-gis.org/inspire>
This program has many parallels to the Norwegian AREALIS.

REFERENCES

AREALIS paper to GIS conference in Istanbul, FIG 3 http://www.fig.net/figtree/com_3_istanbul/Symposium_papers.htm
AREALIS web site: www.statkart.no/arealis
AREALIS web site, short english info: <http://www.statkart.no/arealis/hvaerarealis/arealisenglish.html>
INSPIRE web site: <http://www.ec-gis.org/inspire>
Hole kommune, protected area <http://hole.siden.as/index.php?cat=6110>
Baerum kommune. <http://ww.baerum.kommune.no - kartdata>

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