Country Report 2003

(Based on the PCGIAP-Cadastral Template 2003)

Sweden

Country/state for which the indications are valid:	Sweden
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I. Country Report

A. Country Context

Geographical Context

Sweden has about 450,000 km^2 and a population close to 9 million. About 80% live in urban areas.

Land use:

Type	**Km^2**	**%**
Arable land	36,000	8
Forest	240,000	53
Built-up areas	13,000	3
Mountain	72,000	16
Water	39,000	9
Sum	**450,000**	**100**

Historical Context

Sweden has developed from settlements after the last ice period. The present country was unified into one kingdom around 1000. During medieval time, it was sometimes a union between Norway, Sweden and Denmark. The modern kingdom was established around 1500 and the democratic state around 1900. Finland and the Baltic States have for different periods been included in the Swedish kingdom and been influenced by the Swedish cadastral system.

Current Political and Administrative Structures

Sweden is one State with one central government and parliament. The king has no political power. For administrative purposes, the country is dived into 21 counties and 280 municipalities. At county level, the State has a regional administration through the county administrative board. There is also a direct elected council with own right to levy taxes and responsible mainly for health care at county level. Most social welfare issues as well as land use planning are the responsibility of the municipalities, who also have direct elected parliament and own right to levy taxes.

The ministries in the central government are small organisations, mainly dealing with policy formulation and preparation of proposals to the parliament. The central administration is carried out by national authorities and agencies, which, within the framework of the legislation and budget frames, have to carry out the implementation of the policy, independently. All governmental decisions have to be taken by the collectively within the government. The government cannot interfere in the decision-making in a national agency.

Historical Outline of Cadastre

The modern Swedish cadastre is based on cadastral books from 1530, established for taxation purposes by the king. These books list real properties village by village and give every unit a number in the village. This numbering system is still used for designation of real properties. During the 17th century these books were complemented by village cadastral maps, showing all real parcels in the village. The purpose of these maps was mainly to improve the taxation of land and make it more just and equal, by surveying the area and value of each land parcel. In order to carry out this task, Lantmäteriet (National Land Survey) was created 1628 as a governmental organisation.

Land registration (land titles) have been confirmed since beginning of history by local courts in order to make it known that a property has changed ownership. Written documents are available from medieval time. 1875 a title registration system was introduced. Court proceedings was compared to the cadastral books and maps and a special registry was established, the real property register in order to give one definition of a real property and a designation to this unit. The title registration system was based on the real property register and the description of the property in the real property register. The real property register was established during a 20-year period from 1910-1930.

In 1930ties a work to establish a comprehensive and coherent national map in one national geodetic system was started. From the beginning, these maps were based on aerial photography, photo mosaics and later orthophotos. The maps were named economic maps and were produced in scales from 1:5,000-1:20,000. Cadastral boundaries were transferred from the old village maps to the new system by mainly photo interpretation of the boundaries and comparison with the old maps. There were no attempts to calculate new areas for the property units. This mapping programme was finished 1978 and is now maintained and complemented with land use plans, regulation and other features of importance for land use rights.

Another important development is that the original cadastral books with its division of the village into real properties also started (around 1600) to be used for recording of the population (birth, death and place of living) by the church, which at that time was a State Church. This recording has been maintained since then and today been taken over by the Tax Authority. In this way all people living in Sweden are connected to a real property in a continuously updated census. This is today a very important possibility for use of land information and social data for public and private planning and administration. The church books are a very interesting source for genealogical research.

In 1960ies a governmental investigation started to look into the question on how the books in the real property register could be modernised. It came out with the proposal to computerise the real property register. One of the main advantages was seen in the possibility to combine information in the real property register with the population register through the property designation and thus make spatial analysis to support physical and economical planning. For this purpose each real property was assigned a centroïd coordinate in the national system. This was actually one of the pioneer works, which later led to the development of Geographic Information Systems, GIS. The decision to computerise the real property register was taken 1968 and the land registry 1970. The system was developed and the first county started with legal force 1975. The system was completed for the whole of Sweden in 1995.

The computerisation of cadastral maps has been made in two ways. First, cadastral parcels were digitised from the economic map, which now is totally digital and has changed name to the real property map. Secondly, surveys of each parcel and parcel (cadastral) maps have been transferred to more accurate cadastral data bases, which have been integrated with the land information system. This process has included many problems in order to link various local geodetic systems into one national system.

B. Institutional Framework

Government Organizations

Lantmäteriet is a governmental authority responsible for real property formation and official real property and geographic information in Sweden. In government, it is represented through Ministry of Environment. It has a regional organisation in each county and local offices in municipalities. Some bigger municipalities also have offices for real property formation (about 38). Lantmäteriet is responsible for the land information system supporting cadastral and land registration.

Land registration (title registration) is a responsibility of special local courts, at the moment 7 courts. They update the land registry, which is an integrated part of the land information system. Taxation authorities are responsible for the Real Property Taxation Registry and the Population Registry, which both are linked to the land information system through the real property designation. A governmental investigation has recently proposed that the responsibility for land registration should move from the courts to Lantmäteriet.

Private Sector Involvement

The private sector is not involved in the official land or cadastral registration, nor in cadastral surveying. The private sector can only be involved as consultants or advisors to a client in particular cases.

Professional Organization or Association

Professional surveyors and land administrators are organised in Svenska Lantmätareföreningen, which have about 1,500 members.

Licensing

There is no licensing system. There is a demand on competence to work as head of a cadastral office, which is at least 2 years relevant practice and a Master Degree in land surveying/land administration.

Education

Master Degrees in land surveying/land administration/ real property economic can be obtained from the Royal Technical University in Stockholm (about 70 per year) the Technical University in Lund (about 30 per year). In addition there are possibilities to obtain a B Sc in the University College of Trollhättan (about 20 per year) and Gävle (about 30 per year).

C. Cadastral System

Purpose of Cadastral System

The cadastral system including the land information system has the following purposes:

- Promote and control sustainable and efficient land use
- Provide land information for land titling, land use planning, land taxation, environmental control and business development.

Types of Cadastral System

From previous situation with different system for urban and rural areas, the system is today one unified system valid for all types of land, also governmental.

Cadastral Concept

According to the Swedish Land Code, all land is divided into real properties. The extension of each real property is defined by the description in the Real Property Registry. A real property unit can consist of one or many land parcels, water parcels or specific rights like hunting, fishing, or from 1st January 2004, a defined room in the space like an apartment in a building or an

underground pipeline. Objects permanently fixed to a piece of land or a construction are belongings to the real property unit.

Content of Cadastral System

- Real property register
- Land Registry
- Building Registry
- Apartment Registry

D. Cadastral Mapping

Cadastral Map

- Cadastral map of each parcel property unit in connection with property formation
- Cadastral index maps
- Land use regulations

Example of a Cadastral Map

(see following page)

Role of Cadastral Layer in SDI

The cadastral index map is widely used in land administration as reference and for planning purposes. It is available in digital format through e.g. cheap viewer software for general use and on the Internet.

The cadastral map is used to describe and document changes in the land use, land ownership and land use regulations.

The cadastral index map is one of the lawyers in the Sweden Geographic Data together with other official maps. In municipalities it is a part of the urban base map system, which is used for planning and management of municipal functions regarding school, health, public utilities etc. It is also widely used for land valuation, e.g. for taxation purposes and form the base for the definition of value areas, using GIS technology.

E. Reform Issues

Cadastral Issues

- An ongoing activity is to improve efficiency, accessibility and service level from the system, through development of Internet applications and through investigations of customary satisfaction etc.
- The introduction of 3D real properties will call for development of methodology to represent 3D properties on paper and on computers.
- The integration in Europe and the interest to make different national systems compatible with each other.
- The change to object-oriented data modeling and new software technology.

Current Initiatives

- Parliament has approved legislation on 3D real property formation, which will come into force 1 January 2004.
- Ongoing daily reform work to improve working procedures based among others on customary satisfaction investigations
- Development works to change IT support system to latest computer technology.

FASTIGHETSBILDNINGSMYNDIGHETEN

KARTA

X-stads lantmäteridistrikt	Upprättad år: 1977	Dnr: 37/77	Aktbilaga: KA

Ärende	Kommun	Län
Avstyckning från Berga 5:2	X-stad	Östmanland
	Registerområde: Y-by	
	Registreringsbevis Registreringsdatum: 1977-05-09 För fastighetsregistermyndigheten Örjan Öster	
Förrättningslantmätare Svea Söder Svea Söder		

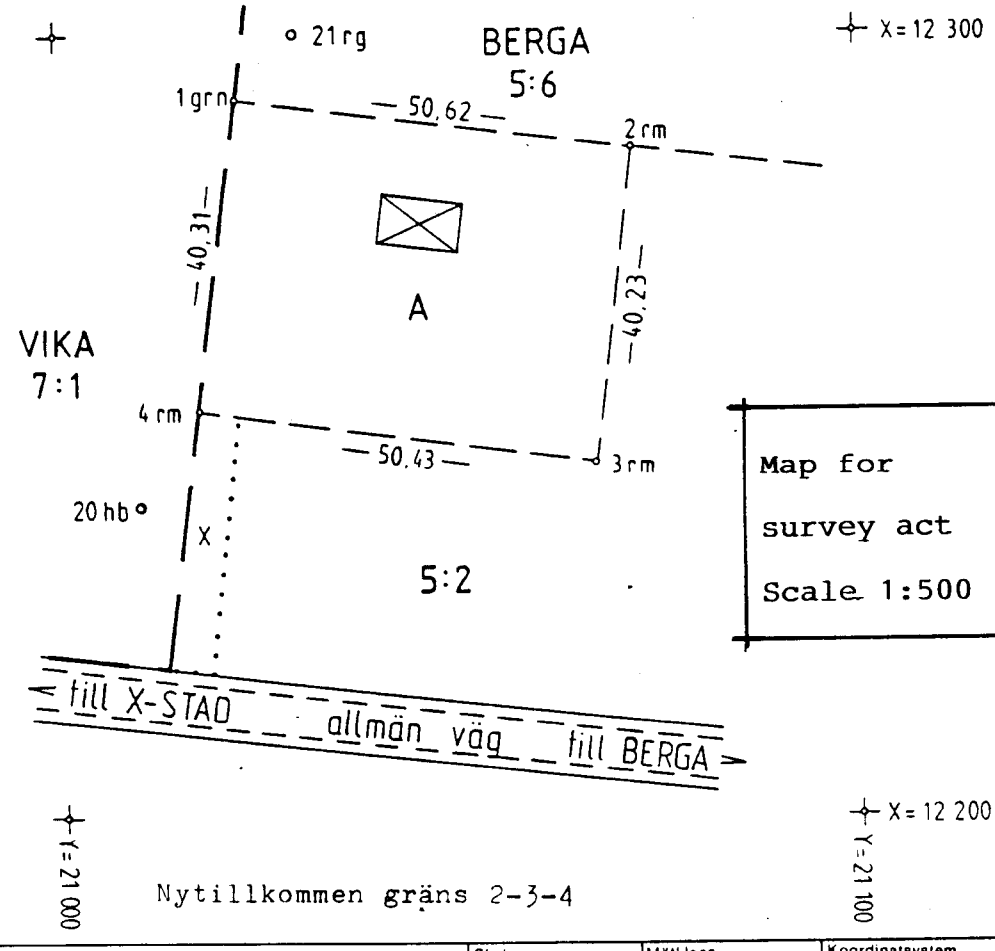
Fastighet, område m m	Fig	Area ~~hektar~~, m² delarea	± ändring/ summa	Ägare, uppgifter till lokal skattemyndighet och andra anmärkningar
Lotten A = R.N:r Berga 5:11			2 035	Carl Cederberg, Byvägen 5, 000 00 X-stad 00-00

Nybildning av servitut
Med lotten A (härskande) följer rätt att för utfart över Berga 5:2 (tjänande) använda vägområdet x till fem meters bredd

Disponering av servitut
Med lotten A (härskande) följer rätt att för en båt utnyttja styckningsfastighetens båtplatsservitut för tre båtar på Berga 5:1 (tjänande)

Avtalsservitut, inskrivet i Berga 5:1 1950-10-16 nr 123

TEKNISK BESKRIVNING, aktbil BE



Map for survey act
Scale 1:500

Framställd genom	Skala	Mätklass	Koordinatsystem
Nymätning	1:1 000	III	2,5 V, 63:14, reg 6
För det tekniska innehållet svarar	Reg karta, lägesangivning: 00000:00		Beteckningsstandard: TFA 4.6B:5

Mätning	Beräkning	Kartering	Ritn redigering
AA	AA	BB	BB

Lantmäteriet BI 0343 1977-03

References

www.lantmateriet.se

II. Questionnaire

1. Cadastral Principles

Deed or title registration

1.1 Is your cadastral system based on deeds registration or on title registration ?

- ☐ deeds registration
- × title registration
- ☐ other: ……

Registration of land ownership

1.2 By law, is registration of land ownership compulsory or optional ?

- × compulsory
- ☐ optional
- ☐ other: ……

1.3 If felt necessary, please, comment on the actual practice and the legal consequences.

Approach for the establishment of the cadastral records

1.4 Are landowners required to register their properties systematically during the initial establishment of the cadastre or is registration sporadic, i.e. triggered only by specific actions (such as for example sale) ?

- ☐ systematic
- ☐ sporadic
- ☐ both
- × all properties are already registered
- ☐ other: ……

2. Cadastral Statistics

Population

2.1 What is the **population** of your country ?

9 million

2.2 Please, estimate the **population distribution** between urban and rural areas.

urban: …80… %
rural: …20… %
total: …100… %

Number and distribution of land parcels

2.3 Please, estimate the approximate **total number of the smallest uniquely identified land units**, often called "land parcels" in your country, including urban and rural areas ?

The total number would include all freehold and state owned land, regardless of registered, non-registered or informal holding.

8 million

2.4 What is the approximate **total number of registered strata or condominium units** ? This number would be in addition to the number of land parcels indicated in 2.3 ?

0

2.5 For **URBAN areas**, please, estimate the **distribution between the smallest uniquely identified land units, often called "land parcels"** (i) that are legally registered and surveyed, (ii) that are legally occupied but not registered or surveyed, and (iii) that are informally occupied without any legal title (this may include illegal occupation or squatting).

If the estimation is too difficult or complex using land parcels, you may base your estimation alternatively on the number of people occupying these forms of land parcels.

legally registered and surveyed:
…100… %
legally occupied, but not registered or surveyed:
0… %
informally occupied without legal title:
……0… %
total: …100… %

2.6 For **RURAL areas**, please, estimate the **distribution between the smallest uniquely identified land units, often called "land parcels"** (i) that are legally registered and surveyed, (ii) that are legally occupied but not registered or surveyed, and (iii) that are informally occupied without any legal title (this may include illegal occupation or squatting).

If the estimation is too difficult or complex using land parcels, you may base your estimation alternatively on the number of people occupying these forms of land parcels.

legally registered and surveyed:
…100… %
legally occupied, but not registered or surveyed:
…0… %
informally occupied without legal title:
……0… %
total: …100… %

Number of professionals

Please estimate the total number of *academic professionals* that are active within the cadastral system and the proportion of the time that they actually commit for cadastral matters (as opposed to work outside of the cadastral system) ?

2.7	Total number of **professional land surveyors**, such as licensed surveyors active within the cadastral system:	600
2.8	Proportion of the time that these land surveyors commit for cadastral matters:	100%

2.9	Total number of **lawyers/solicitors** or equivalent active within the cadastral system or land market:	30
2.10	Proportion of time that these lawyers/solicitors commit for cadastral matters or land market:	100%

Remarks and Comments

Please, identify the best aspect of this questionnaire ?

Very simple, clear and useful.

Please, suggest the area in the questionnaire that could be improved ?

Definition of lawyer for cadastral system- land market. In Sweden few in the cadastral system but very many in the real property market.