

## PRODUCT DESCRIPTION

# Map 1:10 000 Download, raster

DOCUMENT VERSION: 1.3

Figure 1. Section of Map 1:10 000 Download, raster.



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## I General description

Map 1:10 000 Download, raster has a similar content as Topography 10 Download, vector and is developed primarily for printing. The map includes, among other things, buildings, land cover, roads, and real property boundaries.

The map can be selected with either real property classification or road name.

**NOTE!** Presented real property boundaries have no legal effect.

### I.1 Contents

A general compilation is available on the Lantmäteriet website under [Map 1:10 000 Download, raster - Documentation](#).

### I.2 Geographic coverage

Nationwide.

### I.3 Geographic section

Produced upon order.

Ordering can be done as:

- municipality
- county
- Sweden
- any selected extent with min/max coordinates (max extent 25 km<sup>2</sup>, based on 1 m per pixel i.e., 5 000 x 5 000 pixels)
- fixed division in 5x5 km squares according to the index system for SWEREF 99 TM
- any polygons or squares larger than the fixed division according to the index system (all affected index squares are delivered)

Delivery:

- index squares 5x5 km
- extent min/max coordinates
- affected index squares 5x5 km for municipality
- affected index squares 5x5 km for county
- affected index squares 5x5 km for Sweden

### I.4 Coordinate system

Plane: SWEREF 99 TM.

Delivery is also made in local SWEREF zones.

## 1.5 Format

Map 1:10 000 Download, raster can be ordered in LZW-compressed GeoTIFF or PNG formats.

For more information, see chapter 3 Contents of the delivery below.

## 2 Quality description

### 2.1 Purpose and use

Map 1:10 000 Download, raster is well suited for use in printing. It is one of Lantmäteriet's most detailed maps and provides a good overview of the real property divisions. Map 1:10 000 Download, raster includes, for instance real property boundaries, buildings, roads, and land cover. The map can be selected with either information about real property classification or road names.

The real property boundaries presented on the map are not exact. It is the boundary markings on the ground together with cadastral maps that are legally valid. This means that you should not rely on the map's boundaries if you want to build, cut down forest or make other changes on a real property.

The map can also be used for creation of consequent products and as input data to geographic information systems.

### 2.2 Data capture

#### 2.2.1 LINEAGE

From the mid-1930s the Economic maps started to be produced. The purpose of the mapping was, among other things, to create a reasonably nationwide set of maps to facilitate the work of finding the correct documents in Lantmäteriet's cadastral archives. The geometric quality of the cadastral maps varies depending on when they were produced. There are some real property boundaries that were measured during the 19<sup>th</sup> century. Generally real property boundaries in more dense built-up areas are of a later date and of better quality.

During the years 1992-97 the analogue information was digitalized. The data set was supplemented and further developed with improved positional accuracy during the establishment of Basic Geographical Data (GGD) from 1995-2004. The mountain area was surveyed between the years 2006-2012.

For more information about lineage, see the product description for [Topography 10 Download, vector](#).

### 2.3 Maintenance

After the GGD was completed in 2004, the focus has been on improving the updating and accessibility of information. The updating of topographic objects is done partly in-house and partly in collaboration with the authorities or organizations responsible for each type of information.

Property boundaries are measured in conjunction with cadastral procedures. This may take place under municipal or state management. The boundaries can also be updated in connection with quality improvement measures.

For more information about maintenance, see the product description for [Topography 10 Download, vector](#).

#### **2.3.1 MAINTENANCE FREQUENCY**

Real property division is continuously updated in conjunction with the creation of real property.

Topographic information is updated at varying intervals depending on the object. The updating is done periodically by Lantmäteriet in-house and more continuously in collaboration with other government agencies, municipalities, and organizations. The in-house collection is done by interpretation in aerial stereo images and orthophotos. Updating in different areas depends on the [image provision program](#), and the agreements with the collaboration partners.

## **2.4 Data quality**

#### **2.4.1 COMPLETENESS**

Completeness relates to Lantmäteriet's selection of each object type. Completeness is described as omission or commission. In case of commission, more objects are included than what is described in the selection, while in case of omission fewer objects are included. There are also certain generalisation rules for information which means that not all objects are presented on the map.

For more information about completeness and selection, refer to the section describing the layers in the product description for [Topography 10 Download, vector](#).

#### **2.4.2 LOGICAL CONSISTENCY**

The structure of point objects, line objects, and area objects must meet certain requirements for geometrical positions to be able to easily create topology.

When storing objects in the database at Lantmäteriet, it is checked that the objects follow the established geometric and topological rules, and that the information is consistent with Open Geospatial Consortium's (OGC) requirements for geometries. Value quantities and objects are also checked for validity before being stored in the database.

For objects included in the real property division, it is checked that they are located in the correct municipality, and that the real property areas correspond to the Real Property Register.

For more information about logical consistency, see the product description for [Topography 10 Download, vector](#).

### 2.4.3 THEMATIC ACCURACY

For more information about thematic accuracy, i.e., that the classification of each object is correct, see the product description for [Topography 10 Download, vector](#).

### 2.4.4 POSITIONAL ACCURACY

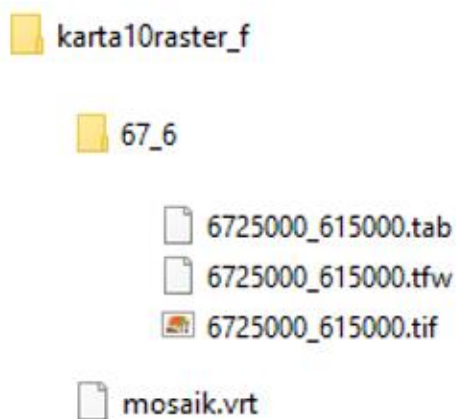
The raster image for a 5x5 km square is 5 000 x 5 000 pixels. This means that the resolution for the digital map images is 1 meter on the ground.

## 3 Contents of the delivery

### 3.1 Folder structure at delivery

In a delivery, the files are sorted under different catalogues, see the example below for how a delivery of Map 1:10 000 Download, raster in SWEREF 99 TM can look like.

Figure 2. Catalogue structure.



#### 3.1.1 THE CATALOGUES KARTA10RASTER\_F AND KARTA10RASTER\_

Under these catalogues the file *mosaik.vrt*; a file that creates a virtual mosaic of all map sheets in the delivery can be found.

The catalogue name for Map 1:00 000 Download, raster with real property divisions is *Karta10raster\_f*. For road names, the catalogue name is *Karta10raster\_v*.

#### 3.1.2 THE CATALOGUE 67\_6

The naming of the catalogue is based on the map area's coordinates and is therefore dynamic. The catalogue name consists of the two first digits in north-south direction and the first digits in east-west direction in the lower left corner, e.g., 67\_6.

Under this catalogue the image files can be found with their attached georeferenced files.

## 3.2 Delivery format

Map 1:10 000 Download, raster is delivered in LZW-compressed GeoTIFF or PNG, together with attached coordinate information. Coordinate information for MapInfo is always included in the delivery. Map 1:10 000 Download, raster can be delivered in SWEREF 99 TM as well as local zones.

The file size for a raster image of 5x5 km is up to 25 Mb.

### 3.2.1 FILE SETS

Choice of delivery format determines which files are delivered.

*Table 1. File sets for LZW-compressed GeoTIFF and PNG.*

LZW-compressed GeoTIFF	PNG
<i>filnamn.tab</i> (georeferencing file for MapInfo)	<i>filnamn.tab</i> (georeferencing file for MapInfo)
<i>filnamn.tfw</i> (georeferencing file for TIFF-format)	<i>filnamn.pgw</i> (georeferencing file for png-format)
<i>filnamn.tif</i> (image file)	<i>filnamn.png</i> (image file)

### 3.2.2 FILE NAME

It is possible to choose a file name based on the area. If no name is chosen, the standard names are delivered.

Files extracted in the index square 5x5 in SWEREF's local zones are named with a zone prefix first in the file name, e.g., *1200\_*.

*Table 2. Alternative file names for extracting index square 5x5 km.*

Alternative file names index square 5x5km	Explanation
<i>672_61_00.tif</i> (standard)	The index square's designation according to the index system
<i>6720000_610000.tif</i>	The coordinates for the square's lower left corner (minN_minE)
<i>6720000_610000_6725500_615000.tif</i>	The coordinates for the circumscribing rectangle's corner (minN_minE_maxN_maxE)
<i>1200_672_61_00.tif</i>	Local SWEREF zone together with the index square's designation

*Table 3. Alternative file names for extracting an optional section.*

Alternative file names optional section min/max coordinates	Explanation
6720000_610000_6725500_615000.tif (standard)	Coordinates for the concerned rectangle's corner (minN_minE_maxN_maxE)
6720000_610000.tif	Coordinates for the square's lower left corner (minN_minE)
6720000_610000_6725500_615000.tif	Local SWEREF zone together with the coordinates for the concerned rectangle's corner (minN_minE_maxN_maxE)



## 4 List of changes

Table 4. List of changes for the document.

Version	Date	Reason and change from previous version
1.3	2022-04-27	Complemented with name changes of the product.  In chapter 3.2.2. Clarified with text as well as changed file name in Table 3.
1.2	2021-10-01	Name changed for the product.  References to the Real Property Map changed to the new product Topography 10 Download, vector.  Example image updated due to changes in the style.
1.1	2019-04-08	Updated links.
1.0	2017-12-19	Established version.