

Reference system

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## National Geodetic Systems

The following is a very short compilation of Swedish national reference and co-ordinate systems. Apart from those mentioned below, many local systems as well as some international ones are also in use in Sweden; see LMV-rapport 1998:4 - a LMV report in the series "Geodesy and Geographic Information Systems".

### National three-dimensional systems

Notation	Description	Ellipsoid
SWEREF 99	Swedish realization of the European geodetic reference system ETRS 89. Defined by the 21 original stations of the national network of permanent GPS reference stations (SWEPOS).	GRS 80 (global)
SWEREF 93	The previous Swedish realization of the European geodetic reference system ETRS 89. Should not be used after the introduction of SWEREF 99.	GRS 80 (global)
RR 92	The national reference system 1992; RT 90 and RH 70, together with RN 92 (see below). Is not a true 3-D system. The system is now seldom used.	Bessel 1841 (local)

### National plane co-ordinate systems

Notation	Description	Ellipsoid/ projection
SWEREF 99 TM	National planar co-ordinate system obtained by projection of SWEREF 99.	GRS 80/ Gauss (TM)
SWEREF 99 12 00 ...	Twelve national planar co-ordinate systems for large-scale applications obtained by projection of SWEREF 99.	GRS 80/ Gauss (TM)
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RT 90	National reference system 1990: based on the third national triangulation (trilateration). (1967-1982).	Bessel 1841/ Gauss (TM)
RT R01 etc.	Twelve regional systems defined during the third triangulation.	Bessel 1841/ Gauss (TM)
RT 38	National reference system 1938: based on the second national triangulation (1903-1950). The precursor of RT 90.	Bessel 1841/ Gauss (TM)

## National height systems

<b>Notation</b>	<b>Description</b>	<b>Zero point</b>
RH 2000	National Height System 2000: based on the third national precise levelling (1978-2003). Replaces older height systems.	Normaal Amsterdams Peil (NAP)
RHB 70	Heights computed in RH 70 using the observations from the third national precise levelling (1978-2003).	Normaal Amsterdams Peil (NAP)
RH 70	National height system 1970: based on the second national precise levelling (1951-1967).	Normaal Amsterdams Peil (NAP)
RH 00	National height system 1900: based on the first national precise levelling (1886-1905).	Slussen in Stockholm

## National geoid models (Geoid height systems)

Notation	Description	Ellipsoid
SWEN08_RH2000	The Swedish geoid model KTH08 adjusted to SWEREF 99 and RH 2000. Corrections applied for land uplift. A smooth residual surface has been used to model the GPS/levelling residuals.	GRS 80
SWEN08_RH70	The Swedish geoid model KTH08 adjusted to SWEREF 99 and RH 70. Corrections applied for land uplift. A smooth residual surface has been used to model the GPS/levelling residuals.	GRS 80
SWEN05_RH2000	The Nordic geoid model NKG 2004 adjusted to SWEREF 99 and RH 2000. Corrections applied for land uplift. A smooth residual surface has been used to model the GPS/levelling residuals.	GRS 80
SWEN05_RH70	The Nordic geoid model NKG 2004 adjusted to SWEREF 99 and RH 70. Corrections applied for land uplift. A smooth residual surface has been used to model the GPS/levelling residuals.	GRS 80
SWEN 05LR	Earlier name of SWEN05_RH2000.	GRS 80
SWEN 01L	National geoid height system 2001: based on the Nordic model NKG 96 adjusted to SWEREF 99 and RH 70. Corrected for postglacial land uplift.	GRS 80
SWEN 98L	National geoid height system 1998: based on the Nordic model NKG 96 adjusted to SWEREF 93 and RH 70. Corrected for postglacial land uplift.	GRS 80
RN 92	National geoid height system 1992. Computed from the Nordic model NKG 89.	Bessel 1841

## National gravity systems

<b>Notation</b>	<b>Description</b>
RG 82	National gravity reference system 1982: based on the third fundamental gravity network measured 1981-1982.
RG 62 ECS 62	National gravity reference system 1962: based on the second fundamental gravity network measured 1960-1966. Connected to the European Calibration System 1962.
RG 41	National gravity reference system 1941: based on the first fundamental gravity network measured 1941-1948.