ISO Geodetic Registry

Item class	GeodeticDatum	
Name	**Kingdom of Saudi Arabia Geodetic Reference Frame 2017**	
Item status	VALID	
Identifier	775	
Alias	KSA-GRF17	
Information source	*Title*	Technical Summary for Saudi Arabia National Spatial Reference System (SANSRS).
	Author	General Directorate of Geodesy
	Publisher	General Directorate of Geodesy, General Authority for Survey and Geospatial Information, Kingdom of Saudi Arabia
	Publication date	2019-06
	Revision date	2021-02
	Other citation details	https://www.gasgi.gov.sa/En/Products/Products_v1/Geodesy/Documents/Technical_Summary_for_SANSRS_v1.1.pdf (accessed 2021-06-07)
Data source	ISO Geodetic Registry	
Remarks	KSA-GRF17 replaces all previous geodetic datums including Ain el Abd, MOMRA Terrestrial Reference Frame 2000 and GDMS.	
Anchor definition	Aligned with ITRF2014 at epoch 2017.0 using 51 IGS primary stations and 16 addtional IGS stations within 2500 km of Riyahd, and fixed to (co-moving with) the stable part of the Arabian tectonic plate as defined by 3 rotation rate parameters estimated from 41 IGS and GASGI GNSS stations. The reference frame is realized by 333 GNSS stations in Saudi Arabia.	
Release date	2019-07	
Coordinate Reference Epoch	2017.0	
Scope	Spatial referencing	
Ellipsoid	GRS 1980	
Prime Meridian	Greenwich	

Extent

Description	**Saudi Arabia - onshore and offshore.**	
Geographic Bounding Box	*West-bound longitude*	34.44
	North-bound latitude	32.16
	East-bound longitude	55.67
	South-bound latitude	16.29

ISO Geodetic Registry

Item class	Ellipsoid	
Name	**GRS 1980**	
Item status	VALID	
Identifier	27	
Alias	Geodetic Reference System 1980	
Alias	GRS1980	
Alias	IAG GRS80	
Alias	International 1979	
Alias	GRS80	
Information source	*Title*	Geodetic Reference System 1980
	Author	H. Moritz
	Publisher	Springer International Publishing
	Publication date	2003-03
	Series/Journal name	Journal of Geodesy
	Issue identification	Volume 74, No. 1
	Page	128–162
Information source	*Title*	Geodetic Reference System 1980
	Author	H. Moritz
	Publisher	International Association of Geodesy
	Publication date	1984
	Series/Journal name	Bulletin Geodesique
	Issue identification	Volume 58, No. 3
	Page	395-405
Data source	ISO Geodetic Registry	
Remarks	Adopted by IUGG 1979 Canberra. Inverse flattening is derived from geocentric gravitational constant GM = 3986005e8 m*m*m/s/s, dynamic form factor J2 = 108263e-8 and Earth's angular velocity = 7292115e-11 rad/s.	
Semi-major axis	6378137.0 m	
Inverse flattening	298.257222101 m	

ISO Geodetic Registry

Item class	PrimeMeridian	
Name	**Greenwich**	
Item status	VALID	
Identifier	25	
Alias	Zero meridian	
Information source	*Title*	Why the Greenwich meridian moved
	Author	S. Malys, J.H. Seago, N.K. Pavlis, P.K. Seidelmann, G.H. Kaplan
	Publisher	Springer International Publishing
	Publication date	2015-12
	Series/Journal name	Journal of Geodesy
	Issue identification	Volume 89, No. 12
	Page	1263–1272
Information source	*Title*	IERS Conventions (2010)
	Author	G. Petit, B.J. Luzum (eds)
	Publisher	Verlag des Bundesamts fur Kartographie und Geodasie
	Publication date	2010
	Edition date	
	Series/Journal name	IERS Technical Notes
	Issue identification	36.0
	Other citation details	ISSN: 1019-4568
Data source	ISO Geodetic Registry	
Greenwich longitude	0.0 °	