

Catalogue of fundamental geo-spatial datasets for Africa: Country report for Cameroon



HSRC
Human Sciences
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PROJECT MANAGERS:

HUMAN SCIENCES RESEARCH COUNCIL (HSRC)

EIS-AFRICA

REGIONAL AND NATIONAL PARTNERS:

CENTRE FOR THE ENVIRONMENT AND DEVELOPMENT OF THE ARAB REGION AND EUROPE (CEDARE)

CENTRE DE SUIVI ECOLOGIQUE (CSE)

OBSERVATOIRE SATELLITAL DES FORETS D AFRIQUE CENTRALE (OSFAC)

REGIONAL CENTRE FOR THE MAPPING OF RESOURCES FOR DEVELOPMENT (RCMRD)

REGIONAL CENTRE FOR TRAINING IN AEROSPACE SURVEYS (RECTAS)

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1. Background

A continental-wide study was conducted in 2006 to catalogue the existence of fundamental geo-spatial datasets in Africa. This study was contracted to a consortium consisting of the HSRC and EIS-AFRICA as lead organisations and numerous sub-regional partners. It was conducted under the auspices of the UNECA.

The study used a questionnaire to obtain information about the 30 fundamental geo-spatial datasets. This report reflects the findings collected from that questionnaire for Cameroon.

2. Data availability

Table 1: Availability of fundamental geo-spatial datasets

Dataset	Have it?	Source
Geodetic control points	Yes	Global Forest Watch/ Entreprise Forestiere Miguel Khoory/ Department Of Surveys/ / Divisional Delegation Of State Land And Land Tenure/ Divisional Service Survey Of Fako South West Province/ Provincial Service Of Urban Development South West Buea/ Interbeton Cameroon/ Limbe Urban Council/ Environmental Resource Trust (ERET) Cameroon
Height datum	Yes	Global Forest Watch/ Department Of Surveys/ Institute National de Cartographie Cameronn/ SONARA/ Divisional Delegation Of State Land And Land Tenure/ Divisional Service Survey Of Fako South West Province/ Provincial Service Of Urban Development South West Buea/ Interbeton Cameroon/ Limbe Urban Council/ Laboratoire d'Electronique et de Traitement du Signal
Geoid model	No	
Aerial photography	Yes	Global Forest Watch/ Entreprise Forestiere Miguel Khoory/ Department Of Surveys/ Institute de la Recherche Geopogiolles et Minieres/ Divisional Delegation Of State Land And Land Tenure/ Divisional Service Survey Of Fako South West Province/ Provincial Service Of Urban Development South West Buea/ Limbe Urban Council/ Laboratoire d'Electronique et de Traitement du Signal/ World Conservation Union (IUCN)
Satellite imagery	Yes	Global Forest Watch/ Entreprise Forestiere Miguel Khoory / Programme de Gesinon Durable de Ressources Nasurelles(PGDRN)/ World Agroforestry Centre West And Central Africa Humid Tropic Region/ Institute de la Recherche Geopogiolles et Minieres / Limbe Urban Council/ Environmental Resource Trust (ERET) Cameroon/ Laboratoire D'electronique et de Traitement du Signal/ Map Maker Trust/ UNECA/ World Conservation Union (IUCN)
DEM	Yes	Global Forest Watch/ Entreprise Forestiere Miguel Khoory / UNECA/ World Conservation Union (IUCN)/ Programme De Gesinon Durable de Ressources Nasurelles (PGDRN)/ World Agroforestry Centre West And Central Africa Humid Tropic Region/ Provincial Service Of Urban Development South West Buea/ Limbe Urban Council/ Environmental Resource Trust (ERET) Cameroon/ Laboratoire d'Electronique et de Traitement du Signal

Dataset	Have it?	Source
Spot heights	Yes	Entreprise Forestiere Miguel Khoory/ Department Of Surveys/ Programme de Gesinon Durable De Ressources Nasurelles(PGDRN)/ World Agroforestry Centre West And Central Africa Humid Tropic Region/Institute National de Cartographie Cameronn/ Institute de la Recherche Geopogiolles et Minieres/ SONARA/ Divisional Delegation Of State Land And Land Tenure.Divisional Service Survey Of Fako South West Province/ Provincial Service Of Urban Development South West Buea/ Interbeton Cameroon/ Limbe Urban Council/ Environmental Resource Trust (ERET) Cameroon
Bathymetry	Yes	GEBCO/ SONARA/ Divisional Delegation Of State Land And Land Tenure Divisional Service Survey Of Fako South West Province/ Interbeton Cameroon/ Limbe Urban Council
Coastline	Yes	Global Forest Watch/ Department Of Surveys/ Programme De Gesinon Durable De Ressources Nasurelles(PGDRN)/ World Agroforestry Centre West And Central Africa Humid Tropic Region/ Institute National De Cartographie Cameronn/ Institute De La Recherche Geopogiolles Et Minieres/ SONARA/ Divisional Delegation Of State Land And Land Tenure Divisional Service Survey Of Fako South West Province/ Interbeton Cameroon/ Limbe Urban Council/ Environmental Resource Trust (ERET) Cameroon/ Laboratoire D'electronique Et De Traitement Du Signal
Water bodies	Yes	Global Forest Watch/ Entreprise Forestiere Miguel Khoory / Department Of Surveys/ Map Maker Trust/ UNECA/ Programme De Gesinon Durable De Ressources Nasurelles (PGDRN)/ World Agroforestry Centre West And Central Africa Humid Tropic Region/Institute National De Cartographie Cameronn/ Institute De La Recherche Geopogiolles Et Minieres/ SONARA/ Divisional Delegation Of State Land And Land Tenure.Divisional Service Survey Of Fako South West Province/ Rumpi Area Participatory Development Project/ Provincial Service Of Urban Development South West Buea/ Interbeton Cameroon/ Limbe Urban Council/ Environmental Resource Trust (ERET) Cameroon
Government boundaries	Yes	Global Forest Watch/ Entreprise Forestiere Miguel Khoory/ Department Of Surveys/ Map Maker Trust/ UNECA/ Programme De Gesinon Durable De Ressources Nasurelles(PGDRN)/ World Agroforestry Centre West And Central Africa Humid Tropic Region/Institute National De Cartographie Cameronn/ Institute De La Recherche Geopogiolles Et Minieres / SONARA/ Divisional Delegation Of State Land And Land Tenure.Divisional Service Survey Of Fako South West Province/ Rumpi Area Participatory Development Project/ Provincial Service Of Urban Development South West Buea/ Interbeton Cameroon/ Limbe Urban Council/ Environmental Resource Trust (ERET) Cameroon/ Laboratoire D'electronique Et De Traitement Du Signal
Populated places	Yes	Global Forest Watch/ Entreprise Forestiere Miguel Khoory/ UNECA/ World Agroforestry Centre West And Central Africa Humid Tropic Region /Divisional Delegation Of State Land And Land Tenure Divisional Service Survey Of Fako South West Province / Rumpi Area Participatory Development Project/ Limbe Urban Council/ Environmental Resource Trust (ERET) Cameroon
EA	Yes	Laboratoire d' Electronique et de Traitement du Signal
Place names	Yes	Global Forest Watch/ Entreprise Forestiere Miguel Khoory/ Department Of Surveys/ Map Maker Trust/ UNECA/ World Agroforestry Centre West And Central Africa Humid Tropic

Dataset	Have it?	Source
		Region/Institute National De Cartographie Cameronn/ Institute De La Recherche Geopogiolles Et Minieres/ SONARA/ Divisional Delegation Of State Land And Land Tenure Divisional Service Survey Of Fako South West Province/ Rumpi Area Participatory Development Project/ Provincial Service Of Urban Development South West Buea/ Interbeton Cameroon/ Limbe Urban Council/ Environmental Resource Trust (ERET) Cameroon/ Laboratoire D'electronique Et De Traitement Du Signal
Feature names	Yes	Global Forest Watch/ Entreprise Forestiere Miguel Khoory/ Department Of Surveys/ UNECA/ Programme De Gesinon Durable De Ressources Nasurelles (PGDRN)/ World Agroforestry Centre West And Central Africa Humid Tropic Region/Institute National De Cartographie Cameronn/ Institute De La Recherche Geopogiolles Et Minieres/ SONARA/ Divisional Delegation Of State Land And Land Tenure Divisional Service Survey Of Fako South West Province/ Rumpi Area Participatory Development Project/ Provincial Service Of Urban Development South West Buea/ Interbeton Cameroon/ Limbe Urban Council/ Environmental Resource Trust (ERET) Cameroon/ Laboratoire D'electronique Et De Traitement Du Signal
Land parcels	Yes	Entreprise Forestiere Miguel Khoory/ Department Of Surveys/ Divisional Delegation Of State Land And Land Tenure Divisional Service Survey Of Fako South West Province/ Rumpi Area Participatory Development Project/ Laboratoire D'electronique Et De Traitement Du Signal
Land tenure	Yes	Global Forest Watch/ Entreprise Forestiere Miguel Khoory/ Department Of Surveys/ Programme De Gesinon Durable De Ressources Nasurelles (PGDRN)/ Divisional Delegation Of State Land And Land Tenure Divisional Service Survey Of Fako South West Province/ Rumpi Area Participatory Development Project/ Limbe Urban Council
Street address	Yes	Divisional Delegation Of State Land And Land Tenure Divisional Service Survey Of Fako South West Province/ Provincial Service Of Urban Development South West Buea/ Interbeton Cameroon/ Limbe Urban Council
Postal code zones	Yes	World Agroforestry Centre West And Central Africa Humid Tropic Region/ Laboratoire D'electronique Et De Traitement Du Signal
Land use planning zones	Yes	Global Forest Watch/ Entreprise Forestiere Miguel Khoory/ Department Of Surveys/ Programme De Gesinon Durable De Ressources Nasurelles (PGDRN)/ Institute National De Cartographie Cameronn/ SONARA/ Divisional Delegation Of State Land And Land Tenure Divisional Service Survey Of Fako South West Province/ Rumpi Area Participatory Development Project/ Provincial Service Of Urban Development South West Buea/ Interbeton Cameroon/ Limbe Urban Council/ Environmental Resource Trust (ERET) Cameroon/ Laboratoire D'electronique Et De Traitement Du Signal
Roads	Yes	Global Forest Watch/ Entreprise Forestiere Miguel Khoory/ Department Of Surveys/ Map Maker Trust/ UNECA/ Programme De Gesinon Durable De Ressources Nasurelles(PGDRN)/ World Agroforestry Centre West And Central Africa Humid Tropic Region/Institute National De Cartographie Cameronn/ Institute De La Recherche Geopogiolles Et Minieres/ SONARA/ Divisional Delegation Of State Land And Land Tenure Divisional Service Survey Of Fako South West Province/ Rumpi Area Participatory Development Project/ Provincial Service Of Urban Development

Dataset	Have it?	Source
		South West Buea/ Interbeton Cameroon/ Limbe Urban Council/ Environmental Resource Trust (ERET) Cameroon
Road centrelines	Yes	Entreprise Forestiere Miguel Khoory/ World Agroforestry Centre West And Central Africa Humid Tropic Region/ Laboratoire D'electronique Et De Traitement Du Signal
Railways	Yes	Department Of Surveys/ Map Maker Trust/ UNECA/ Programme De Gesinon Durable De Ressources Nasurelles (PGDRN)/ World Agroforestry Centre West And Central Africa Humid Tropic Region/ Institute De La Recherche Geopogiolles Et Minieres / Environmental Resource Trust (ERET) Cameroon
Airports	Yes	Global Forest Watch/ Department Of Surveys/ UNECA/ Programme De Gesinon Durable De Ressources Nasurelles(PGDRN)/ Institute National De Cartographie Cameronn/ Institute De La Recherche Geopogiolles Et Minieres/ SONARA/ Divisional Delegation Of State Land And Land Tenure Divisional Service Survey Of Fako South West Province/ Interbeton Cameroon/ Limbe Urban Council/ Environmental Resource Trust (ERET) Cameroon/ Laboratoire D'electronique Et De Traitement Du Signal
Bridges	Yes	Entreprise Forestiere Miguel Khoory/ Divisional Delegation Of State Land And Land Tenure Divisional Service Survey Of Fako South West Province/ Rumpi Area Participatory Development Project/ Provincial Service Of Urban Development South West Buea/ Limbe Urban Council/ Laboratoire D'electronique Et De Traitement Du Signal
Power	Yes	Department Of Surveys/ World Conservation Union (IUCN)/ World Agroforestry Centre West And Central Africa Humid Tropic Region/Institute National De Cartographie Cameronn/ Institute De La Recherche Geopogiolles Et Minieres/ SONARA/ Divisional Delegation Of State Land And Land Tenure Divisional Service Survey Of Fako South West Province/ Rumpi Area Participatory Development Project/ Provincial Service Of Urban Development South West Buea/ Interbeton Cameroon/ Limbe Urban Council/ Laboratoire D'electronique Et De Traitement Du Signal
Telecommunication	Yes	Department Of Surveys/ World Conservation Union (IUCN)/ World Agroforestry Centre West And Central Africa Humid Tropic Region/Institute National De Cartographie Cameronn/ Institute De La Recherche Geopogiolles Et Minieres/ SONARA/ Rumpi Area Participatory Development Project/ Provincial Service Of Urban Development South West Buea/ Interbeton Cameroon/ Limbe Urban Council/ Laboratoire D'electronique Et De Traitement Du Signal
Land cover	Yes	Global Forest Watch/ Entreprise Forestiere Miguel Khoory/ Department Of Surveys/ World Conservation Union (IUCN)/ Programme De Gesinon Durable De Ressources Nasurelles(PGDRN)/ World Agroforestry Centre West And Central Africa Humid Tropic Region/Institute National De Cartographie Cameronn/ Institute De La Recherche Geopogiolles Et Minieres/ SONARA/ Divisional Delegation Of State Land And Land Tenure.Divisional Service Survey Of Fako South West Province/ Rumpi Area Participatory Development Project/ Provincial Service Of Urban Development South West Buea/ Interbeton Cameroon/ Environmental Resource Trust (ERET) Cameroon/ Laboratoire D'electronique Et De Traitement Du Signal
Soils	Yes	Entreprise Forestiere Miguel Khoory/ World Conservation Union (IUCN)/ Programme De Gesinon Durable De Ressources

Dataset	Have it?	Source
		Nasurelles(PGDRN)/ World Agroforestry Centre West And Central Africa Humid Tropic Region/Institute National De Cartographie Cameronn/ Divisional Delegation Of State Land And Land Tenure.Divisional Service Survey Of Fako South West Province/ Rumpi Area Participatory Development Project/ Environmental Resource Trust (ERET) Cameroon/ Laboratoire D'electronique Et De Traitement Du Signal
Geology	Yes	Entreprise Forestiere Miguel Khoory/ World Conservation Union (IUCN)/ World Agroforestry Centre West And Central Africa Humid Tropic Region/Institute National De Cartographie Cameronn/ Institute De La Recherche Geopogiolles Et Minieres/ Divisional Delegation Of State Land And Land Tenure.Divisional Service Survey Of Fako South West Province/ Environmental Resource Trust (ERET) Cameroon

Cameroon has access to 29 of the 30 fundamental geo-spatial datasets and the country therefore has an almost complete access to these datasets. Most datasets are also held by more than one agency and one could deduct that there is either an oversupply of data or a lack of coordination in this geo-information industry in this country.

2.1 Data characteristics

Data characteristics were well completed. The table indicates for example: satellite imagery is available at the scale of 20 – 80m, it is 26-75% complete (depending on the agency who keeps the data) and available in a report, map or GIS format. Empty cells in the table indicate that no response was received.

Table 2: Dataset characteristics

Dataset	Scale at which available (000/ resolution m)	Completeness (%)	Format	Accessibility
Geodetic control points	12-50/ 125-250	1-75	Report/ Map	Authorisation/ Payment/ Free
Height datum	>10/ 12-50	1-75	Report/ Map	Authorisation/ Payment/ Free
Geoid model			Map	
Aerial photography	>10/ 20-50	26-75	Report/ Map	Authorisation/ Payment/ Free
Satellite imagery	20-80	26-75	Report/ Map/ GIS	Authorisation/ Payment/ Free
DEM	50-125	26-100	Map/ GIS	Unrestricted/ Authorisation/ Payment/ Free
Spot heights	12-50/ 125-250	26-99	Report/ Map	Authorisation/ Payment/ Free
Bathymetry	All scales	100	Db/ GIS	Unrestricted/ Authorisation/

Dataset	Scale at which available (000/ resolution m)	Completeness (%)	Format	Accessibility
				Payment
Coastline	12-50	1-75	Report/ Map/ GIS	Authorisation/ Free
Water bodies	All scales (majority 12-50)	26-100	Report/ Map/ GIS	Unrestricted/ Authorisation/ Free /Payment
Government boundaries	All scales (majority 12-50)	51-100	Report/ Map/ GIS	Authorisation/ Free
Populated places	12-50/ 62.5-100	26-100	Report/ Map	Authorisation/ Free
EA	10/50	51-75	Report/ Map	Authorisation/ Free
Place names	12-50	26-100	Report/ Map/ GIS	Authorisation/ Free/ Payment
Feature names	12-50	26-99	Report/ Map	Authorisation/ Free
Land parcels	>10	26-75	Report/ Map	Authorisation/ Free
Land tenure	10-50	26-75	Report/ Map/ GIS	Authorisation/ Free
Street address	>10	26-50	Report/ Map	Authorisation/ Free
Postal code zones	>10	100		
Land use planning zones	10-50	1-99	Report/ Map	Authorisation/ Free
Roads	10-50	26-99	Report/ Map/ GIS	Unrestricted/ Authorisation/ Free/ Payment
Road centrelines	>10	51-99		Authorisation/ Free
Railways	10-50	26-100	Report/ Map/ GIS	Unrestricted/ Authorisation/ Free
Airports	10-50/ 62.5-100	51-100	Report/ Map/ GIS	Unrestricted/ Authorisation/ Free
Bridges	>10/ 10-250	51-99	Report/ Map	Authorisation/ Free/ Payment
Power	>10/ 10-50	1-51	Report/ Map	Authorisation/ Free/ Payment
Telecommunication	>10/ 10-50	25-75	Report/ Map	Authorisation/ Free/ Payment
Land cover	10-250	25-75	Report/ Map/ GIS	Authorisation/ Free/ Payment
Soils	10-50	1-75	Report/ Map	Authorisation/ Free/ Payment
Geology	10-50	1-50	Report/ Map	Authorisation/ Free/ Payment

Although many datasets are available at a detailed scale, it is incomplete (i.e. spatial coverage is not 100%). This might also indicate that most datasets are available at a sub-national level (e.g. province or district). Most data is available in a report, map or GIS format and with authorisation required to obtain the data. Many data sets also require payment.

3. Conclusion

Despite the fact that it seems that Cameroon has access to most of the fundamental geo-spatial datasets at a detailed scale, the incomplete spatial coverage indicates that the data quality is not adequate. Based on this it cannot be concluded that the existing geo-spatial data is useful.