

Towards Nationally Integrated Geospatial Information Management

UNGGIM, DEQING, ZHEJIANG PROVINCE, CHINA
20-22 OCTOBER 2019



S.M.P.P SANGAKKARA
SURVEYOR GENERAL
SRI LANKA

SRI LANKA



Land Area	64,630 km ²
Water Area	980 km ²
Total Area	65,610km ²
Population	21,203,000
Population Density	328.07/km ²

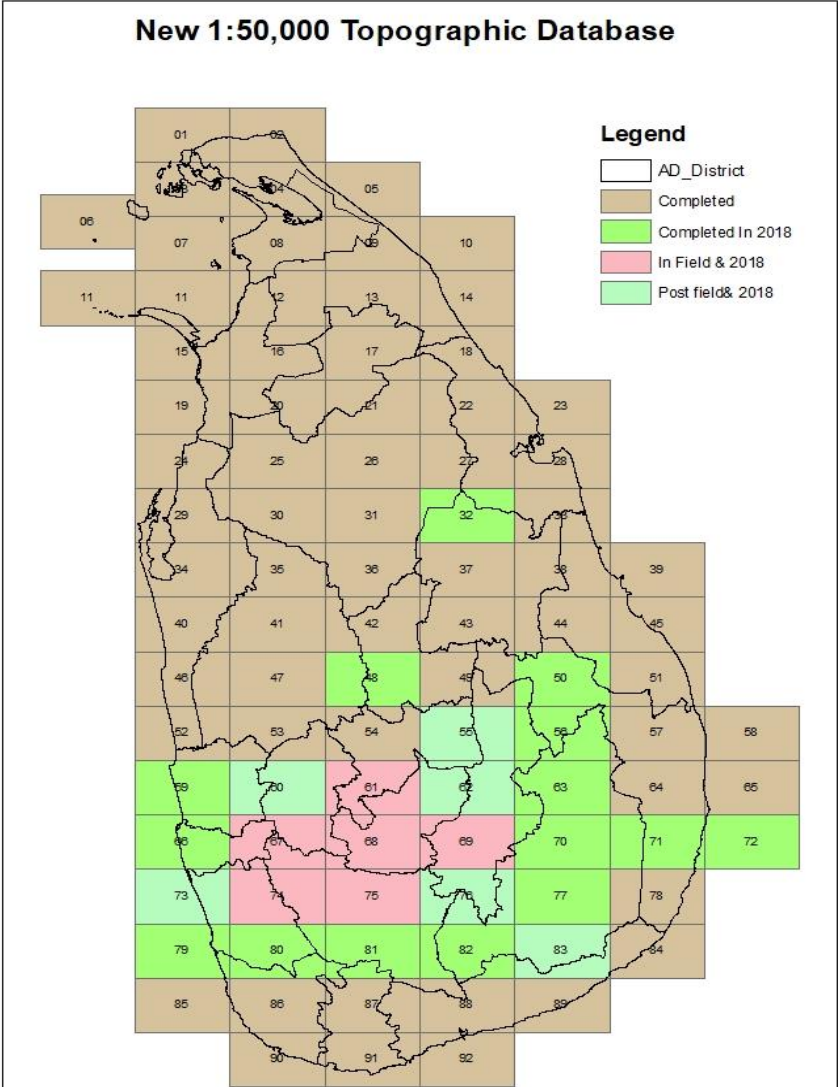


Survey Department

- National Mapping Agency.
- National Cadastral Agency.
- Maintaining of LIS Databases of the country.
- Maintaining Geodetic control data for the country.

1:50,000 NEW Topo data base(50K) 2018

Country wide coverage is available- Continuous updating in progress

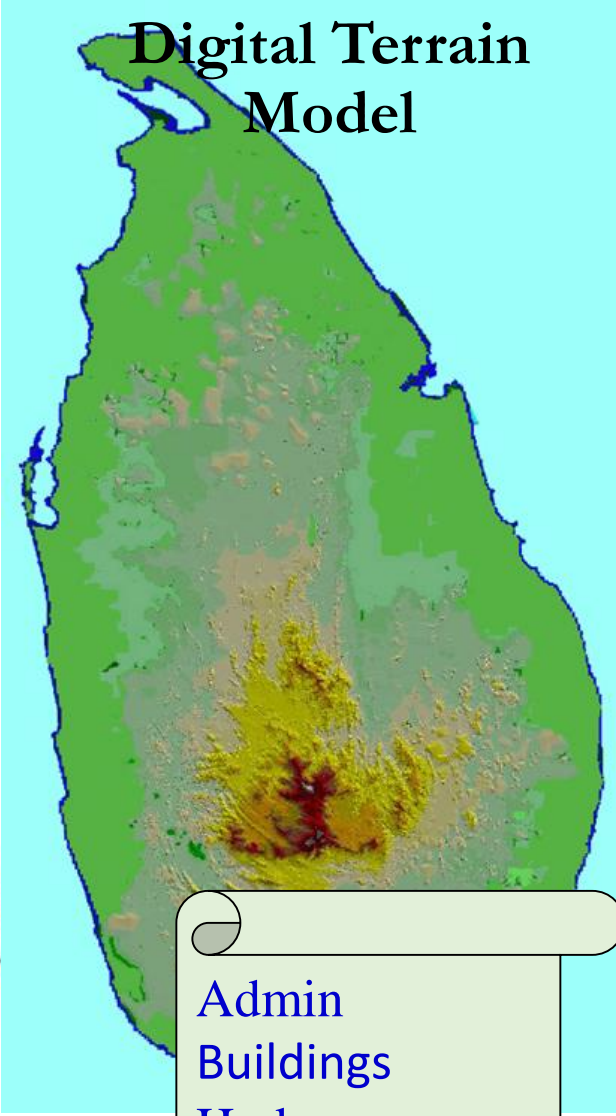
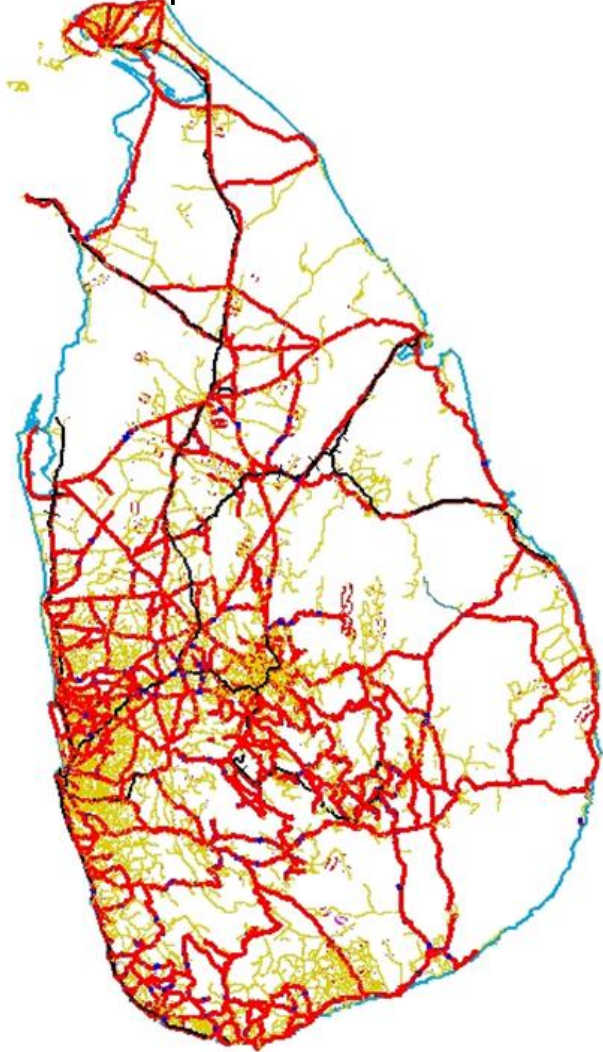


There are 92 data ties for the whole country

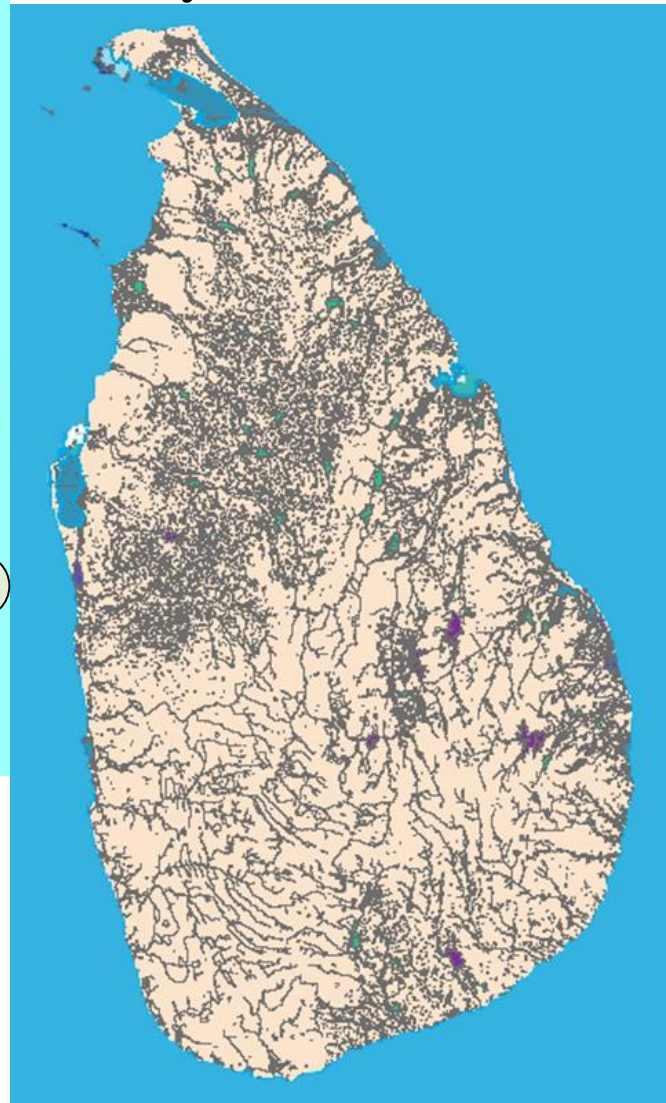
Digital Terrain Model

50K

Transport Features



Hydro Features



- Admin
- Buildings
- Hydro
- Trans
- Landuse
- Terrain
- Utility

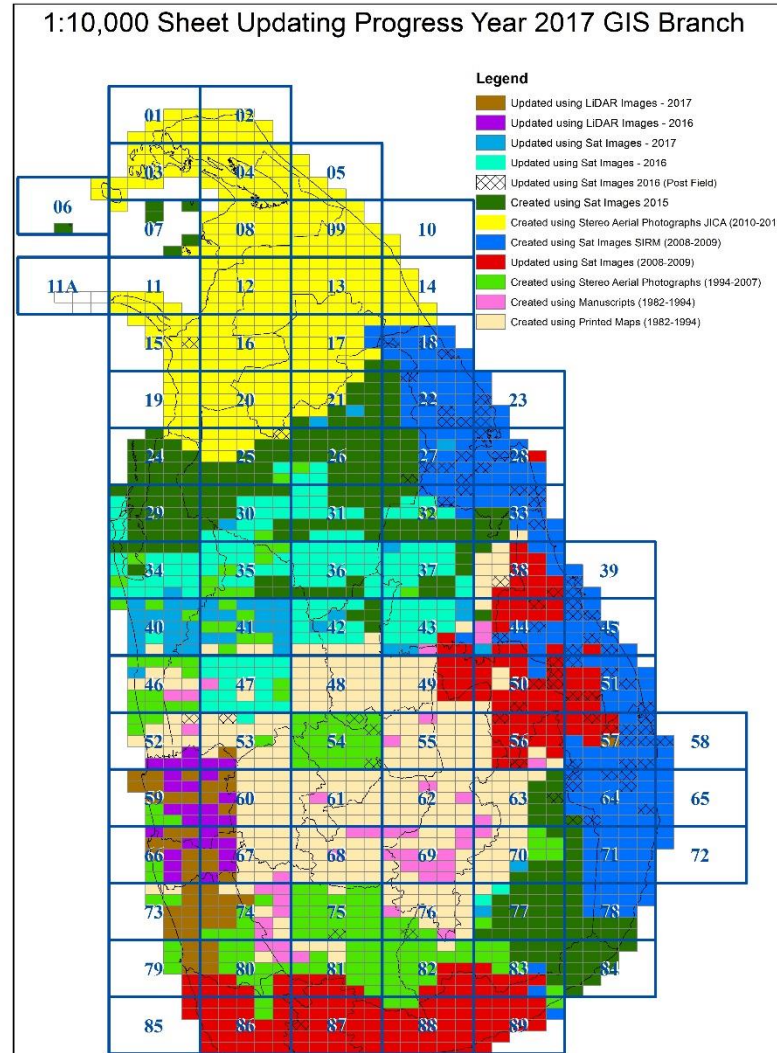
GeoDatabase – Feature Classes

Layer	Feature Class
Admin (AD)	AD_GN_Pg
Buildings	CO_Building_Pt
	CO_Building_Pg
Hydro (HY)	HY_Hydro_Pt
	HY_Hydro_Li
	HY_Hydro_Pg
Landuse (LU)	LU_Landuse_Pt
	LU_Landuse_Pg
Terrain (TE)	TE_Terrain_Pt
	TE_Terrain_Li
Transport (TR)	TR_Transport_Pt
	TR_Transport_Li
Utility (UT)	UT_Utility_Li
	UT_Utility_Li

02.) 1:10,000 NEW Topo database (10K) 2018

Country wide coverage is available- Continuous updating in progress

There are **1834 data ties** for the whole country

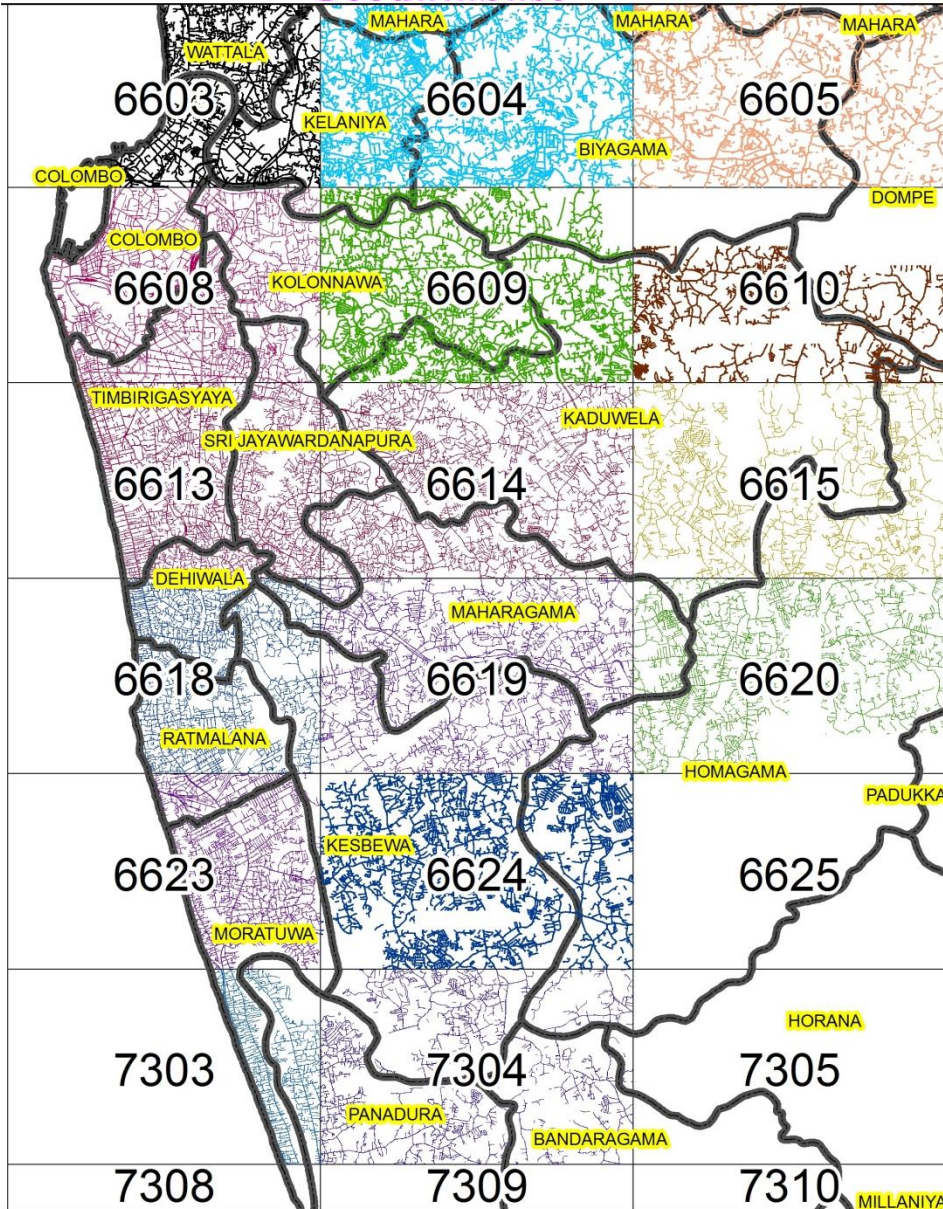


Legend

- Updated using LiDAR Images - 2017
- Updated using LiDAR Images - 2016
- Updated using Sat Images - 2017
- Updated using Sat Images - 2016
- Updated using Sat Images 2016 (Post Field)
- Created using Sat Images 2015
- Created using Stereo Aerial Photographs JICA (2010-2011)
- Created using Sat Images SIRM (2008-2009)
- Updated using Sat Images (2008-2009)
- Created using Stereo Aerial Photographs (1994-2007)
- Created using Manuscripts (1982-1994)
- Created using Printed Maps (1982-1994)

- ArcInfo Coverages/Shapefiles/GeoDatabases (ESRI – ArcGIS)
- DGN (Microstation - Bentley)
- DXF (AutoCAD - Autodesk)

Current status - 1.1000 Topo Database

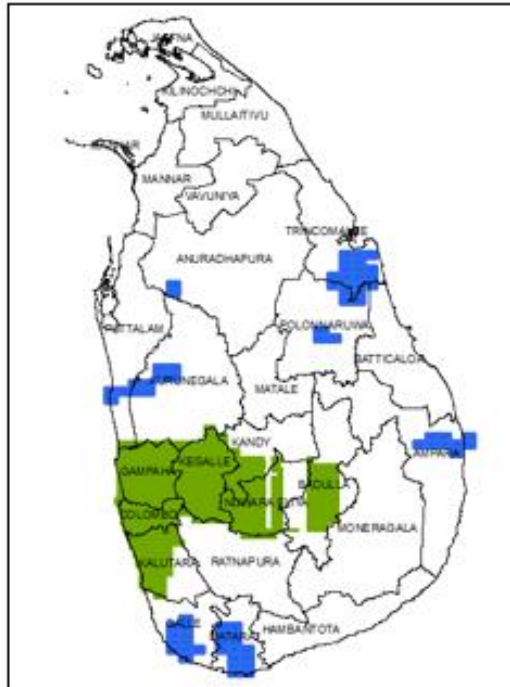


Construction (CO)	CO_Building_Pt
	CO_Building_Pg
Hydro (HY)	HY_Hydro_Pt
	HY_Hydro_Li
	HY_Hydro_Pg
Landuse (LU)	LU_Landuse_Pt
	LU_Landuse_Pg
	LU_Reserves_Pg
Terrain (TE)	TE_Terrain_Pt
	TE_Terrain_Li
Transport (TR)	TR_Transport_Pt
	TR_Transport_Li
	TR_Transport_Segment

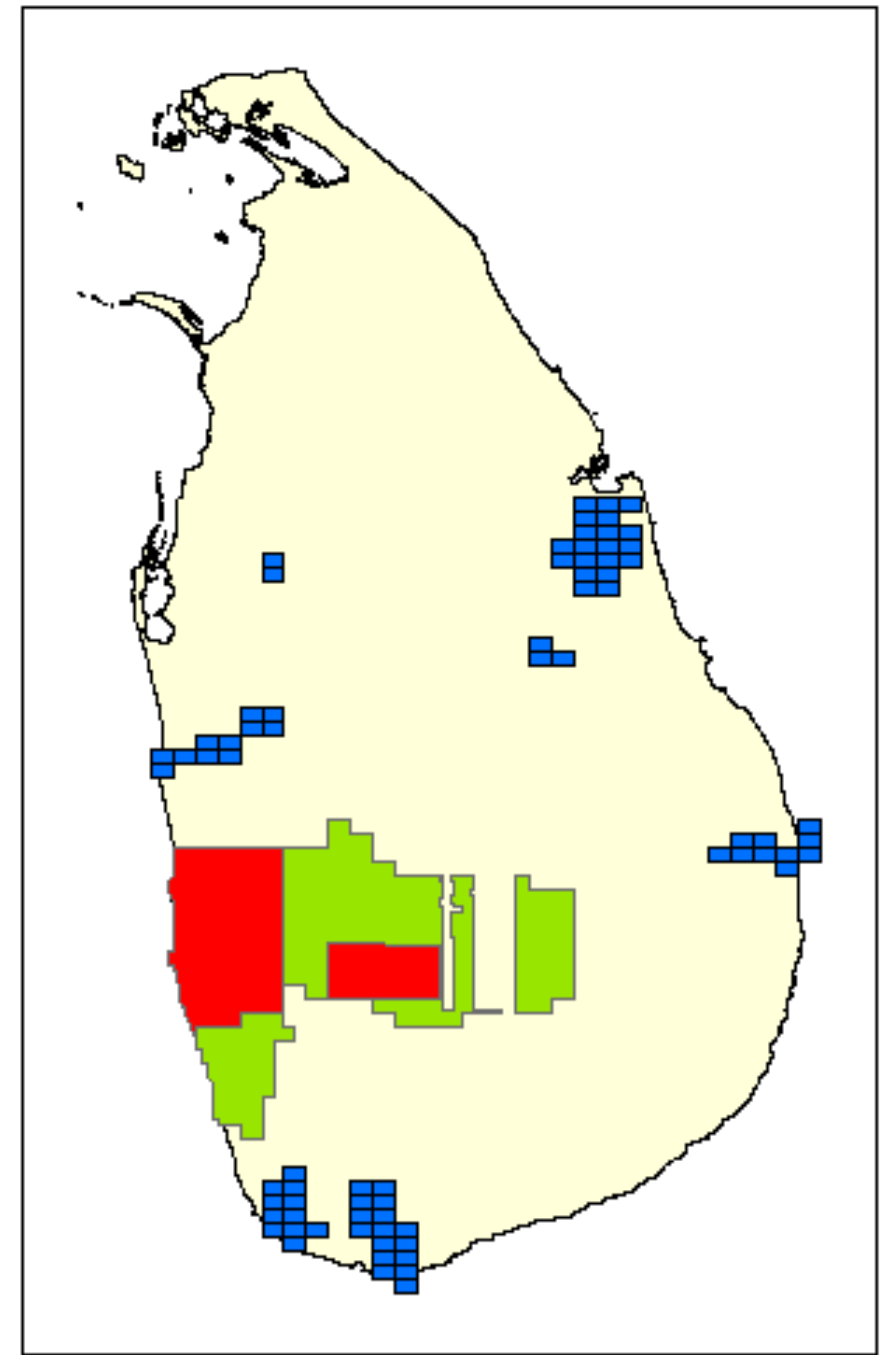
LiDAR coverage – Sri Lanka

Completed – 19,000 sqkm

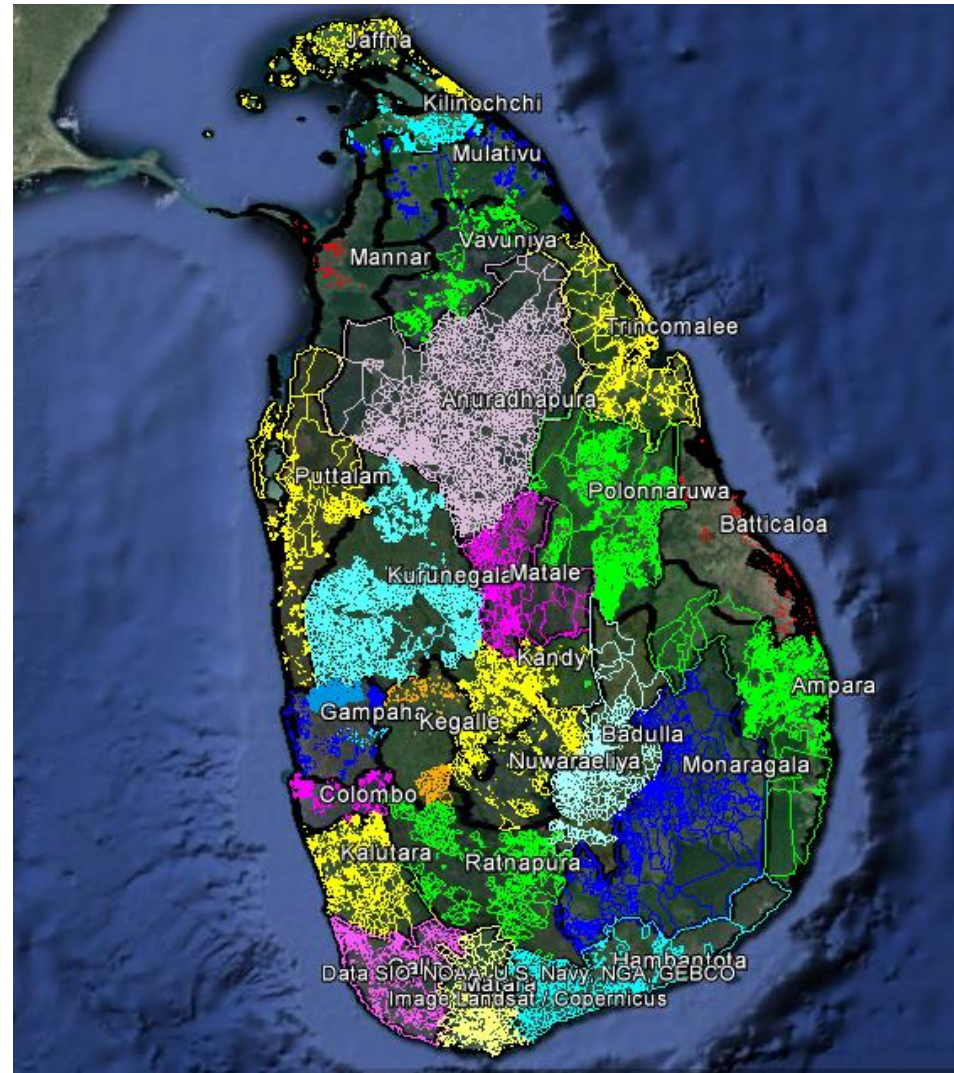
LiDAR survey Status in Sri Lanka – 2017



- : LiDAR survey under JICA project
- : LiDAR survey under CRIP project
- : Balance area proposed for LiDAR survey



Plan Fabric of Sri Lanka (Showing Plans prepared since 1800)



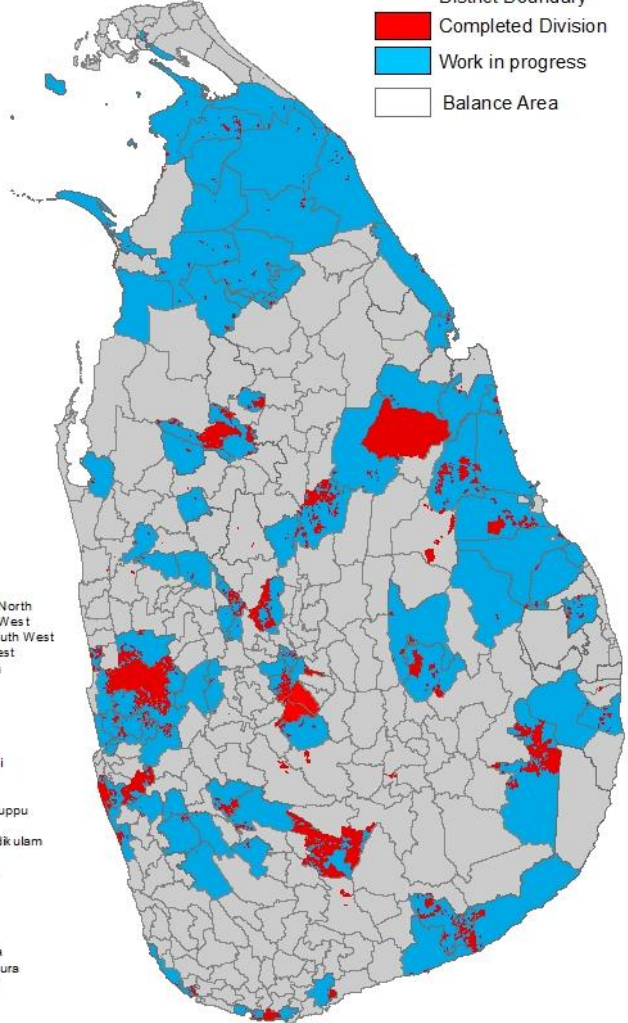
Bimsaviya Programme 2017 (Status of Cadastral Surveys)

- | | |
|-----|----------------------------------|
| 1 | Nallur |
| 2 | Jaffna |
| 3 | Kandavalai |
| 4 | Karachchi |
| 5 | Maritime Pattu |
| 6 | Tunukkai |
| 7 | Musali |
| 8 | Vavuniya North |
| 9 | Vavuniya South |
| 10 | Nuwaragampalatha Central |
| 11 | Rajaganaya |
| 12 | Thalawa |
| 13 | Tambuttegama |
| 14 | Nuwaragampalata East |
| 15 | Medirigiriya |
| 16 | Hingurakgoda |
| 17 | Welkanda |
| 18 | Trincomalee Town & Four Gravet |
| 19 | Kinniya |
| 20 | Kantale |
| 21 | Eachchilampattu (Verugai) |
| 22 | Eravur Pattu (Chenkalady) |
| 23 | Mannunai North (Batticaloa Town) |
| 24 | Koralai Patu South & Central |
| 25 | Sammanthurai |
| 26 | Ampara (Namal Oya) |
| 27 | Galewela |
| 28 | Dambulla |
| 29 | Hartspattuwa |
| 30 | Kandy Four Gravets |
| 31 | Udunuwara |
| 32 | Yatinuwara |
| 33 | Udupalatha |
| 34 | Doluwa |
| 35 | Kotmale |
| 36 | Wennappuwa |
| 37 | Kurunegala |
| 38 | Rideegama |
| 39 | Pannala |
| 40 | Mallewapitiya |
| 41 | Katana |
| 42 | Divulapitiya |
| 43 | Mirigama |
| 44 | Attanagalla |
| 45 | Minuwangoda |
| 46 | Wattala |
| 47 | Ja-Ela |
| 48 | Gampaha |
| 49 | Mahara/Kadawata |
| 50 | Dompe (Weke) |
| 51 | Kelaniya |
| 52 | Homagama |
| 53 | Moratuwa |
| 54 | Kesbewa |
| 55 | Ratmalana |
| 56 | Dehiwala |
| 57 | Panadura |
| 58 | Horana |
| 59 | Kalutara |
| 60 | Galigamuwa |
| 61 | Kuruwita |
| 62 | Ratnapura |
| 63 | Balangoda |
| 64 | Weligepola |
| 65 | Mahiyanganaya |
| 66 | Ridimaliyadda |
| 67 | Siyambalanduwa |
| 68 | Hikkaduwa |
| 69 | Galle Four Gravets |
| 70 | Weligama |
| 71 | Matara Four Gravets |
| 72 | Hambantota |
| 73 | Lunugamwehera |
| 74 | Tissamaharاما |
| 75 | Beliatla |
| 76 | Addalaichchenai |
| 77 | Akkaraipattu |
| 78 | Damana |
| 79 | Lahugala |
| 80 | Maha Oya |
| 81 | Thirukkovil |
| 82 | Uhana |
| 83 | Koralai Pattu North |
| 84 | Koralai Pattu West |
| 85 | Mannunai South West |
| 86 | Mannunai West |
| 87 | Porativu Pattu |
| 88 | Kuchchaveli |
| 89 | Morawewa |
| 90 | Mutur |
| 91 | Seruvila |
| 92 | Iplogama |
| 93 | Pachchilaipalli |
| 94 | Nanaddan |
| 95 | Mantai East |
| 96 | Puthukkudiyiruppu |
| 97 | Vavuniya |
| 98 | Vengalcheddikulam |
| 99 | Ambanpola |
| 100 | Galgamuwa |
| 101 | Ganewatta |
| 102 | Giribawa |
| 103 | Kobeigane |
| 104 | Mahawa |
| 105 | Polpithigama |
| 106 | Rasnayakapura |
| 107 | Wariyapola |
| 108 | Puttalam |
| 109 | Ayagama |
| 110 | Nivithigala |
| 111 | Agalawatta |
| 112 | Bulathsinhala |
| 113 | Ingiriya |
| 114 | Palinda-Nuwara |
| 115 | Poonakariya |
| 116 | Madhu |
| 117 | Mannar |
| 118 | Mantai West |



Legend

- Province Boundary
- District Boundary
- Completed Division
- Work in progress
- Balance Area



Scale : 1:2,051,674

The National Land Title Registration Programme

Land Information

SURVEY DEPARTMENT OF SRILANKA



[HOME](#)

[CADASTRAL PLAN](#)

[SPORADIC PLAN](#)

[PARCEL FABRIC](#)

[ALL](#)

[INVESTOR GUIDE FOR RESERVES](#)

[SEARCH](#)

Parcel ID

District

DS Division

GN Division

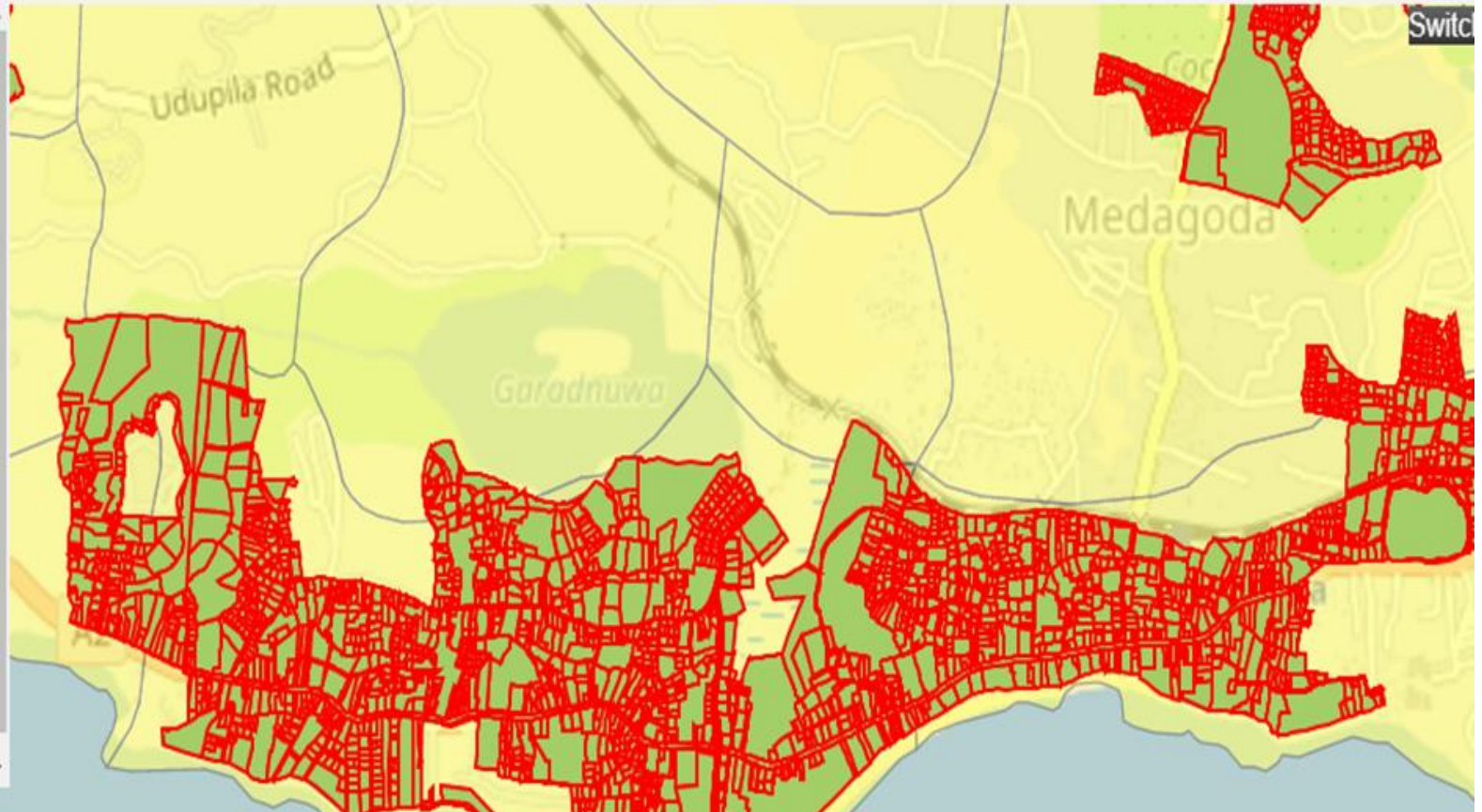
CM No

Block No

Lot No

Status

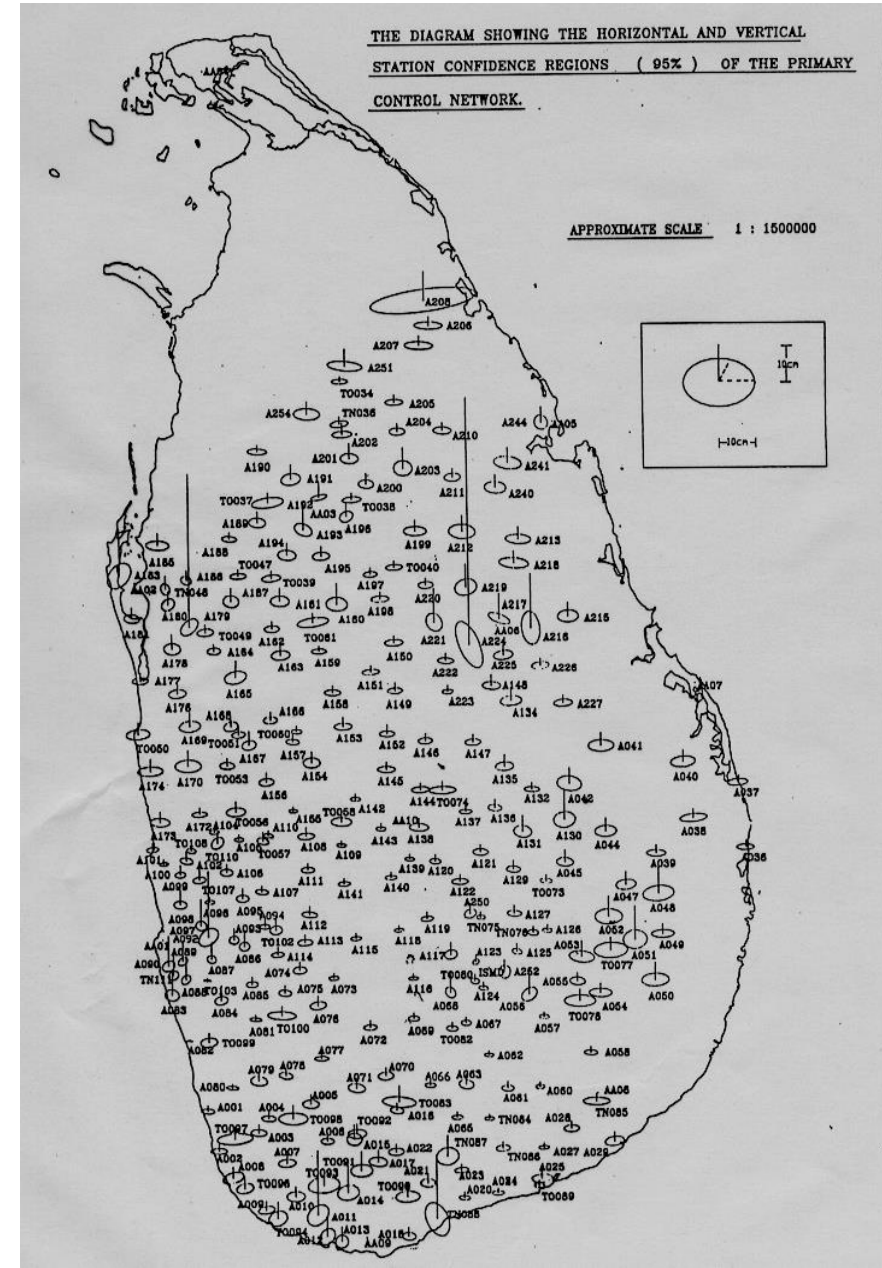
Extent m²



NEW NETWORK WITH GPS

- Coordinates measured with GPS instruments
- Average accuracy 1:790,000
- GN 99
- Country has an accurate vertical Control.
- Part is covers by CORS

Geodetic Network



Other Geo-information Data Producers

- Urban Development Authority.
- Road Development Authority.
- Water Board.
- Electricity Board.
- Telecom Authority.
- Irrigation Department.
- Environment Authority.
- Military.

Non Spatial (Attribute) Data Collectors.

- Municipalities and Local Authorities.
- Censes and Statistical Department.
- Public administration department.
- Register General Department.
- Health, Education, Postal, Archeology, Land, etc.
- Private sector.

Why Nationally Integrated GI

- Knowledge Base Governance.
- Knowledge Base Economy.
- Avoid Duplication.
- For reliable authoritative Data.
- Enabling Information Sharing.
- Services through single window to the public.

Difficulties of getting Stockholder Partnerships.

- Reluctant to share Data by Authorities.
- No common Formats and Data Semantics.(Technical interoperability)
- Lack of coordination between Authorities.(Human interoperability)
- Unplanned Projects (Local/Foreign)
- Lack of technical Expertise.
- Lack of IT infrastructure and Systems.
- Lack of recourses and funds for data Updating

Towards National Integrated GI

- Started Developing the National Spatial Data Infrastructure (NSDI).
First part of the portal completed.
- Formulation Of Data Policy for the country.
- Providing fundamental Data for NSDI voluntarily.
- Providing data to government agencies under MOU without charges.
- Providing technical support for needed agencies.

Towards National Integrated GI

- Need strong Political support.
- UN can set guidelines , policies and monitoring system for member countries and convey it to the highest levels.
- Develop countries to share data.
- Provide readily available common flat forms/software and Technical support by able countries.

Do not leave any one behind.