

HOW TO CREATE GEO DATA BASE FOR DISASTER MANAGMENT

5th Meeting of the Expert Group on Disaster-Related Statistics in Asia and the Pacific and

Workshop on Disaster Risks in East and North-East Asia

At

From 20th To 22nd, September 2015 INCHEON

REPUBLIC OF KOREA



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Sri Lanka

1.INTRODUCTION:

The Department of Census and Statistics paid prior attention to Disaster expose areas to develop the socio economic data base to quick response.

To prepare an Integrated Development Plan to these area, it is important to use suitable tools such as Geoinformatics to obtain maximum benefits from the utilized resources.

The geodatabase is the common data storage and management framework for GIS. It combines "geo" (spatial data) with "database" (data repository) to create a central data repository for spatial data storage and management. It can be leveraged in desktop, server, or mobile environments and allows you to store GIS data in a central location for easy access and management.

What are the data and Software used

*Software & Web applications *Qgis *Arc gis *Stata *Google Earth





What are the data and Software used

*Data

*Raw data of the Census of Population and Housing

*Listing MRCB data and C.B maps (hard copy) "F1"

*Digital maps of G.N. and Census Blocks boundaries

SRI LANKA IN THE WORLD



2.ADMINISTRATIVE BOUNDARIES OF THE COUNTRYPROVINCES LEVEL – 9 PROVIENCESDISTRICTS LEVEL – 25 DISTRICTS

PROVINCE OF SRI LANKA



DISTRICTS OF SRI LANKA



ADMINISTRATIVE BOUNDARIES OF THE COUNTRYD.S.DIVISIONS LEVEL – 331 D.S.D'SG.N.DIVISIONS LEVEL – 14021 GN D'S

SRI LANKA DS DIVISION MAP



SRI LANKA GN DIVISION MAP



Socio Economic Data of the Grama Niladari Administrative Level

DISTRICT_N	DSD_Name	GND_Name	MC_UC_PS_Nan	POLLI_DV_Name	GND_NO	SECTOR_N	POP	HU	Male	Female	less_than:	over_60
Kalutara	Mathugama	Walagedara South	Mathugama PS	Mathugama	773A	Rural	1272	332	617	655	300	241
Kalutara	Walallawita	Miriswatta	Walallawita PS	Agalawatta	778A	Rural/Estate	1159	281	569	590	304	161
Kalutara	Walallawita	Pannila South	Walallawita PS	Agalawatta	791A	Rural/Estate	864	223	411	453	206	140
Kalutara	Mathugama	Lewwanduwa Wes	Mathugama PS	Mathugama	792A	Rural/Estate	1122	282	540	582	273	166
Kalutara	Mathugama	Keppetiyagahaland	Mathugama PS	Mathugama	771A	Rural	834	213	399	435	244	95
Kalutara	Beruwala	Kalavila	Beruwala PS	Beruwala	767	Rural	2113	547	1034	1079	526	345
Kalutara	Mathugama	Nugagahalanda	Mathugama PS	Mathugama	772B	Rural	824	210	386	438	243	107
Kalutara	Mathugama	Pussalamulla	Mathugama PS	Mathugama	797A	Rural	1634	419	776	858	433	213
Kalutara	Beruwala	Bandanagoda	Beruwala PS	Beruwala	750A	Rural	1346	303	650	696	325	169
Kalutara	Mathugama	Keeranthidiya	Mathugama PS	Mathugama	797	Rural/Estate	1889	491	925	964	557	222
Kalutara	Dodangoda	Galpottavila	Dodangoda PS	Mathugama	799B	Rural	645	168	342	303	196	59
Kalutara	Mathugama	Yatadolawatta East	Mathugama PS	Mathugama	802D	Rural / Estate	2779	726	1337	1442	718	399
Kalutara	Dodangoda	Nehinna	Dodangoda PS	Mathugama	801	Rural/ Estate	1233	337	602	631	314	210
Kalutara	Dodangoda	Ihala Nebada	Dodangoda PS	Mathugama	807A	Rural/Estate	889	230	424	465	243	135
Kalutara	Mathugama	Iddagoda East	Mathugama PS	Mathugama	806	Rural/Estate	1509	378	727	782	369	219
Kalutara	Mathugama	Hiriketiya	Mathugama PS	Mathugama	806B	Rural/Estate	665	178	320	345	127	122
Kalutara	Mathugama	Gurudola	Mathugama PS	Mathugama	806C	Rural	476	123	224	252	116	73
Kalutara	Mathugama	Mathugama East	Mathugama PS	Mathugama	805	Rural	2151	545	1043	1108	514	305
Kalutara	Mathugama	Mathugama North	Mathugama PS	Mathugama	805B	Rural	2215	567	1091	1124	534	358
Kalutara	Mathugama	Sandasirigama	Mathugama PS	Mathugama	795B	Rural	1610	420	766	844	383	252
Kalutara	Mathugama	Ovitigala	Mathugama PS	Mathugama	795	Rural	2203	553	1028	1175	528	348
Kalutara	Mathugama	Horawala North	Mathugama PS	Mathugama	794A	Rural/Estate	944	236	465	479	236	138
	1											



But according to the intensity of the occurring of Disaster this level data is not enough to take decision or marking policy planning

Hence to fulfill these data gaps this year The department of Census and Statistics is implementing a new project called Census block (CB) level data collection to collect the grassroots level socio economic data as pre disaster data.

What is Census Blocks ?.

A census block is the smallest geographic unit used by the department of Census and statistics of Sri Lanka for tabulation of 100-percent data. (data collected from all houses, rather than a sample of houses) Census blocks data product contains an area database with 65008 Census Blocks for the 14021 GN Divisions.

To do this work GN divisions divided in to few parts according to the density of population and the Fiscal features of the are.

GND Map prepared for Village Level Administrative matters

* Sketch Map created by the Grama Niladari







F1

ජන හා නිවාස සංගණනය. 2011 - ශු ලංකාව යුදානෙ, බ්ட்டுவசதிகள் தொகைமதிப்பு, 2011 - මූහත්නෙය Census of Population and Housing, 2011 - Sri Lanka

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മല്ലാവുതിയെ രോഗനുഗ്, ക്രബ്ഡാണങ്ങള്ളൾ ഉടയർക്കി identification information

யானன் வானியம் பரவா நகுது பென்சும் தொகையதிப்புக் கண்டத்திற்குரிய தொகுப்பு Summary for Census block

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It has been divided in to 65008 CB throughout the country





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*Draw a Line for the CB area using this information and created a polygon layer.



Image © 2017 CNES / Airbus

*Draw a polygon for the inundated area using this information and created a polygon layer.



*Draw a Building points for the CB area using this information and created a Building point layer.



*Overlay polygon, line, point layers in the disaster area and clip the building layer by inundated layer and create inundated building map and report.



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*Add census data to the attribute table of the point layer by joint tool. Before add, prepaid the data in proper way using STATA software.



*Information of the affected buildings and demographic data of the affected peoples could created using create report tool.

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7/3/2017

O I'm Cortana. Ask me anvthing

Result

*From 215 building 63 were affected in this C.B-no 6
*Total population - 219
*Male - 104
*Female -115
*Age below 18 years - 77
*Age 18 years and above - 142



Limitations of the Study

*Census data is not up to date (2012)

*Census data is available for only occupied units at the moment.





Suggestions

*Using Google earth and a few visits of the field can create a building layer(point layer) for the risk area.

*Updating the F1 regularly in the risk area the department will be able to provide up to date Information using this method.

Geo Informatics for the better world order





*UN - ESCAP *Government of Korea *Government of Sri Lanka *All other facilitators

Thanks