# Occurrences of Land Slides in Kegalle District, Sri Lanka

## R.Gananathan[1] & N.Piratheeparajah[2]

Department of Geography, University of Jaffna

Gananathan21@gmail.com[1] & npiratheeparajah@gmail.com[2]

## Abstract

*Landslide is the biggest challenge for the people and the administrators of the Kegalle district, Sri Lanka and the sustainable development of Kegalle district is severely affected by landslides in every years. This research is analyzing the landslides and its impacts in the Kegalle district from 2000 to 2016. Primary and Secondary data have been gathered and analyzed in order to identify the places which have higher probability of landslide occurrences and the impacts caused by it. Primary data have been collected through field observation and unstructured interviews and Secondary data collected from District Disaster Management Center, National Building Research Organization , Department of Meteorology, Colombo and Survey Department. Collected data have been analyzed using Descriptive statistical method. Maps have been produced using Arc GIS 10.1 software. Overlay analysis in GIS used to identify the causes for the landslides in the Kegalle district. Compare with other Divisional Secretariat divisions Aranayakka Ds division is affecting by landslides in every year and the frequencies of the land slide occurrences are increasing in last ten years in Aranayakka area. Slope and the various elevations is the important factors that determining the landslide occurrences in the area. Based on the rank of landslide occurrences Kegalle, PulathGukuppiddiya, Yattiyanthodda, Dereniyagala is affecting according to this order. There two Grma Niladari divisions affecting much in the last ten years from 2000 to 2016 by landslide such as Debethgama and Aranayakka. During the last ten years 79 death events, 22 injuries, 2508houses damages recorded in the study area. There are several landslide mitigation measures taking place in the study area, but those are not sustain and with less capacity to mitigate the future landslide events. Integrated and sustainable mitigation measures will help to prevent the landslide impacts in the Kegalle District of Sri Lanka.*

***Keywords ;*** *Kegalle, Landslide occurrences, Aranayakka & Damages*

## *Nffhiy khtl;lj;jpy; epyr;rhpT epfo;Tfs;*

### mwpKfk;

cyfshtpa uPjpapy; ,aw;if mdu;j;jq;fs; r%f>nghUshjhu kw;Wk; cstpay; uPjpahd gy;NtWgl;l jhf;fq;fspid cz;Lgz;Zfpd;wd. me;j tifapy;; epyr;rupT kdpj tho;f;iff;F rthyhf mikfpd;wJ. epyr;rupT vd;gJ Xu; jpzptirjy; nraw;ghL MFk;. mjhJ kz; my;yJ ghiwj;njhFjpapd; rha;TfspD}lhf <u;g;g;gpd; tpisthf efu;j;jg;gLk; nraw;ghh;Nl kz;rupT MFk;. (Fedrico Agliard,2012) ,yq;ifapd; 20% gFjp epyr;rupT mghaj;jpw;F cs;slq;Fk; gFjp vd milahsg;gLj;jg;gl;Ls;sJ. ,jy; Nffhiy khtl;lKk; cs;slq;Ffpd;wJ.,t; khtl;lk; rg;ufKt cau;epyj;jpy; mike;jpUg;gjdhYk; njd; Nky; gUt;fhw;Wf;fspd; nry;thf;fpdhy; cau;thd mstpyhd kio;thf;fpid ngWtjdhYk; > ,g;;gpuNjrj;jpy; Nkw;nfhs;sg;gLk; mgptpUj;jp eltbf;iffs; kw;Wk; Kiwaw;w epyg;gad;ghl;L eltbf;iffSk; epyr;ruptpidj; J}z;Ltjhf fhzg;gLfpd;wJ. ,k;

khtl;lj;jpy; Landslide, Potential landslide, Slope Failure, Cutting Failure, Rock Fall, Debris Mfpa epyr;rupTfs; eilngWtjhf $wg;gLfpd;wJ.( National Building Research organization, 2016 ) mz;ikf;fhyq;fshf mjpfupj;J tUk; epyr;rupT epfo;Tfs;> capu; ,og;Gf;fs;> clikr;Nrjk;> cl;fl;likg;G ghjpg;Gf;fs;> tptrhak; ifj;njhopy; uPjpahd ghjpg;Gf;fis ,t; khtl;lj;jpy; cz;L gz;Zfpd;wJ. Muk;g fhyq;fspid tpl mz;ikf;fhyq;fshf epyr;rupT epfo;Tfspd; vz;zpf;if mjpfupj;J tUjdhy; 2000k; Mz;bw;F gpw;gl;l fhyj;jpy; Nffhiy khtl;lj;jpy; epfo;e;j epyr;rupT epfo;Tfs; njhlu;ghfTk; mjd; ghjpg;Gf;fs; njhlu;ghfTk; mtw;Wf;fhd fhuzq;fs; njhlu;ghfTk; ,t; Ma;thdJ fhyuPjpahfTk; ,luPjpahfTk; Nehf;Ffpd;wJ.

**Ma;tpd; Nehf;fq;fs;**

❖ Nffhiy khtl;lj;jpy; epyr;rupT epfo;Tfs; mbf;fb eilngWk; ,lq;fis milahsg;gLj;jYk; mtw;Wf;fhd fhuzq;fisf; fz;lwpjYk;.

❖ Nffhiy khtl;lj;jpy; epyr;ruptpdhy; Vw;gLk; ghjpg;Gf;fis kjpg;gply;.

❖ Nffhiy khtl;lj;jpy; vjpu;fhyj;jpy; epyr;rupT mdu;j;j ghjpg;Gf;fis jzpg;gjw;fhd gupe;Jiufis Kd;itj;jy;.

**Kiwapay;**

Nffhiy khtl;lj;jpy; 2000 – 2016 Mk; Mz;L fhyg;gFjpapy; epyr;rupT epfo;Tfshy; mjppff; ghjppf;fg;gLk; ,lj;jpidf; fz;lwptjw;F epyr;rupT epfo;Tfspd; mbg;gilapy; gpuNjr nrayu; uPjpapy; glkhf;fg;gl;Ls;sJ. ,jw;Fg; Gtpapay; jfty; xOq;F(GIS) %yk; epfo;Tfspd; vz;zpf;if mbg;gilapy; mjp$ba epfo;Tfs; eilngWk; ,lk; ,mjp$ba epyr;rupT epfo;T eilngWk; gpuNjr nrayu; gpuptpid mjp$ba epyr;rupT epfo;T eilngWk; fpuhkNrtfu; gpuptTfs; milahsg;gLj;jg;gl;L glkhf;fg;gl;Ls;sJ. epyr;rupT epfo;Tfs; glkhf;fg;gl;L mg;gFjpapy; epyr; rupT epfo;Tfs; mjppff; eilngWtjw;Fupa fhuzq;fisf; fz;lwpAk; Nehf;fpy; Nffhiy khtl;lj;jpy; kz; glk;> epyg;gad;ghl;Lg; glk;> fy;ypay ;glk;> ,lTaug;glk;> kiotPo;r;rpg; glk; vd;gd Nkw;nghdUj;jpy; gFg;gha;Tf;F(Overlay) cl;gLj;jg;gl;L fhuzq;fs; fz;lwpag;gl;Ls;sJ. fhuzq;fspd; cz;ikj;jd;ik Neh;fhzy; %yk; cWjp nra;ag;gl;lJ. Nffhiy khtl;lj;jpy; 2000 – 2016 Mk; Mz;L fhyg;gFjpf;Fs; eilngw;w epyr;rupT epfo;Tfspd; ghjpg;G jd;ikfs; capu; ghjpg;G> cilik ghjpg;G> ghjppf;fg;gl;l egu;fs;> ghjppf;fg;gl;l FLk;gq;fs; vd;gd Micro soft Excel %yk; tiuGfshfTk; ml;ltizfshfTk; kjpg;gplg;gl;Ls;sJ. mj;Jld; ghjpg;gpd; jd;ik vt;thW ,luPjpahf NtWgl;Ls;sJ vd;gJ Gtpapay; jfty; xOq;F %yk; milahsg;gl;L glkhf;fg;gl;Ls;sJ. Nffhiy khtl;lj;jpy; epyr;rupT epfo;Tfspd; vz;zpfapid Fiwg;gjw;Fk; mjdhy; Vw;gLk; ghjpg;gpid fl;Lg;gLj;Jtjw;Fk; Neu;fhzy; %yk; ngwg;gl;l KbTfisf; nfhz;Lk; Vida Ma;Tfspy; $wg;gl;l gupe;Jiufs; kw;Wk; KbTfspidf; nfhz;L gupe;Jiufs; Kd;itf;fg;gl;Ls;sd.

**juTG; gFg;gha;Tk; KbTfs;**

Nffhiy khtl;lj;jpd; epyr;rupT epfo;Tfspy; epyr;rupT epfo;Tfspd; vz;zpifahdJ mjpfupj;JtUfpd;wJ.(Report of the national disaster managementcenter,2010) 2000 –
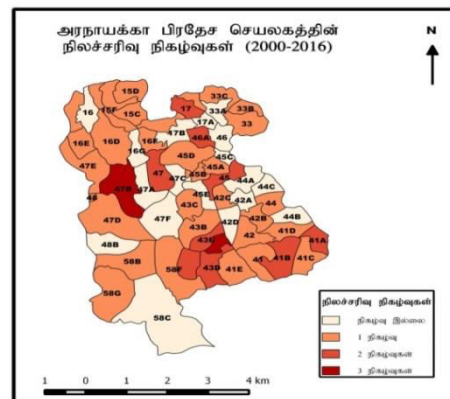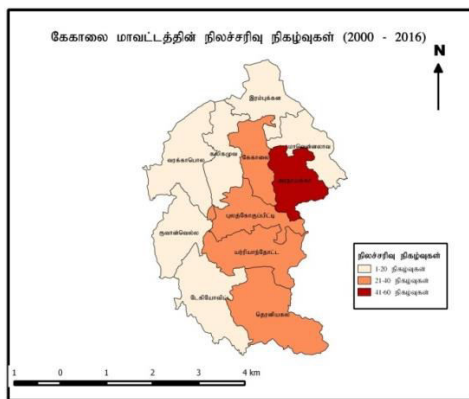
2016 Mk; Mz;bw;F ,ilapy; 227 epyr;rupT epfo;Tfs; eilngw;Ws;sJ. ,jpy; mjp$ba epyr;rupT epfo;thdJ muehaf;f gpuNjr nrayh; gpuptpy; (56 epfo;Tfs;) eilngw;Ws;sJ. njudpadfy gpuNjr nrayh; gpuptpy; 29 epfo;TfSk; GyjNfhFg;gpl;batpy; 20 epfo;TfSk; eilngw;Ws;sJ kpff;Fiwe;jsT epfo;Tfs; ,uk;Gf;fd gpuNjr nrayh; gpuptpy; (5 epfo;Tfs;) eilngw;Ws;sJ. fypfKttpy; 11 epfo;TfSk; &td;nty;ytpy; 12 epfo;TfSk; eilngw;Ws;sJ. ,jid ml;ltiz-1, tiuglk;1 fhl;Lfpd;wJ.

*ml;ltiz-1 Nffhiy khtl;lj;jpd; epyr;rupT epfo;Tfs;(2000-2016)*

| gpuNjr nrayh; gpupT | epfo;Tfspd; vz;zpf;if |
|---|---|
| muehaf;f | 56 |
| Gyf;NfhFg;gpl;ba | 28 |
| NlfpNahtpl;l | 17 |
| njudpafy | 29 |
| fypfKt | 11 |
| Nffhiy | 26 |
| khntd;;dyht | 6 |
| ,uk;Gf;fd | 5 |
| &thd;nty;y | 12 |
| tuf;fhnghy | 14 |
| ah;hpahe;Njhl;l | 23 |

*%yk; -mdu;j;j Kfhikj;Jt epiyak;, 2016*

,e;j tifapy; Nffhiy khtl;lj;jpy; epyr;rupT epfo;tpdhy; mjpfk; ghjpf;fg;gLk; gFjp muehaf;fg; gpuNjr nrayh; gpupT MFk;. ,jid tiuglk; 2fhl;Lfpd;wJ.

 

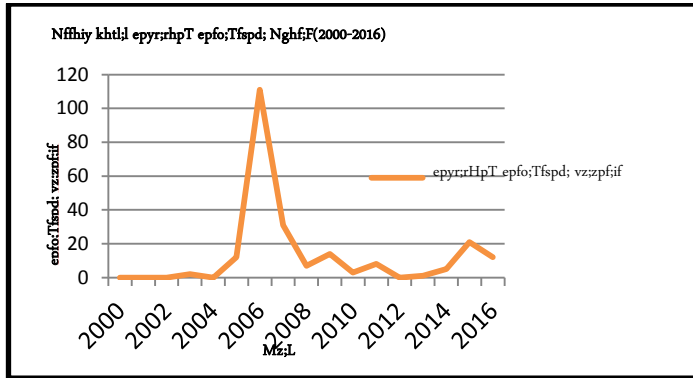*tiuglk; 1*           *tiuglk;-2*

*%yk; -juTg; gFg;gha;T*        *%yk; -juTg; gFg;gha;T*

muehaf;f gpuNjr nrayh; gpuptpy; 2000–2016 f;Fs;; 56 epfo;Tfs; eilngw;Ws;sd. ,q;F mjp$ba epyr;rupT epfo;Tfspd; vz;zpf;if %d;W MFk;. mWgJ fpuhk Nrtfu; gpupTfspy;
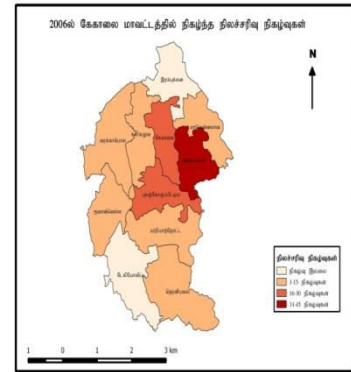
gjpndl;Lf; fpuhk Nrtfu; gpuptpy; epyr;rupT epfo;Tfs; eilngwtpy;iy. Nlgj;fk clNg[; kw;Wk; muehaf;f Mfpa ,U fpuhk Nrtfu; gpupTfspYNk mjp$ba epyr;rupT epfo;Tfs; eilngw;Ws;sd.

Mz;L uPjpahf Nehf;Fk; NghJ 2006 ,y; 111 epfo;Tfs; eilngw;Ws;sJ. ,t; epfo;Tfspd; tpguk; tiuglk;-3 fhl;Lfpd;wJ.
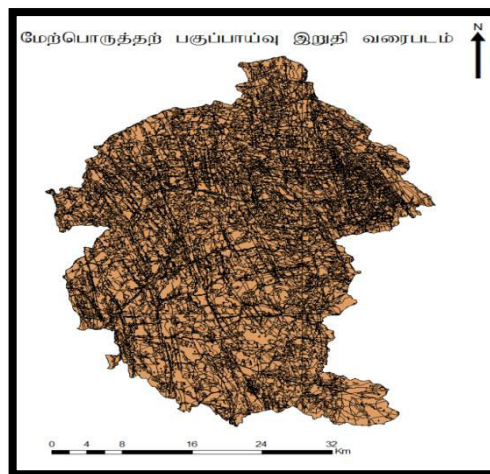


**cU-1**      *tiuglk-;3*

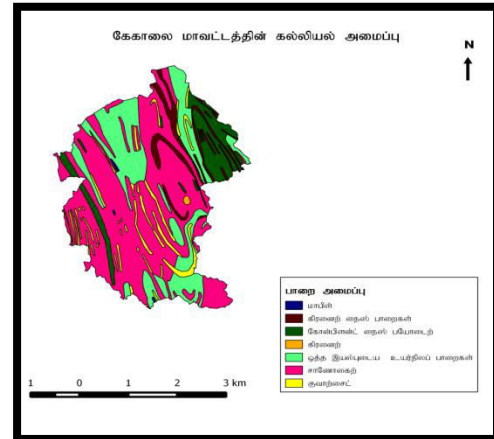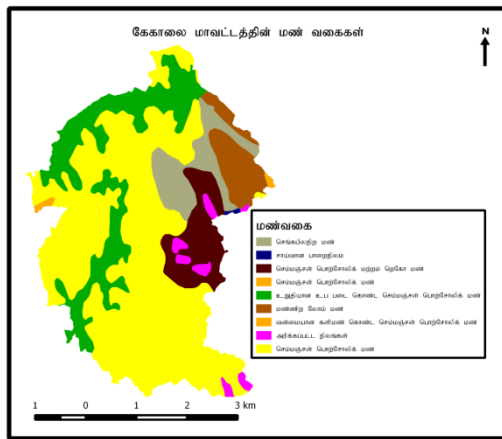**%yk;- juTg; gFg;gha;T**     *%yk; -juTg; gFg;gha;T*

Nffhiykhtl;lj;jpd;epyr;rupT epfo;Tfs; fpof;FgFjp rhu;e;J mjpfsT eilngWfpd;wd. Fwpg;ghf muehaf;ftpy; kpff;$ba mstpy;Nffhiy>Gyf;NfhFg;gpl;ba , al;bahe;Njhl;l kw;Wk; njudpafytpy; $ba msTk; Vida gFjpfspy; Fiwthd epfo;TfSk; gjpthfpAs;sd. ,t;thW epyr;rupT epfo;Tfs; ,luPjpahf NtWgLtjw;Fupa fhuzq;fspidf; fz;lwptjw;F epyg;gad;ghl;Lg;glk;> kz;glk;> fy;ypypay;; glk;> ,lTaug;glk;> kiotPo;r;rpg;glk;> epyr;rupT epfo;Tfspd; glk; vd;gd Nkw;nghUfj;jw; gFg;gha;Tf;F cl;gLj;jg;gl;L ngwg;gl;l Nkw;;nghUfj;jw; gFg;gha;Tglk; tiuglk; -4 fPNo fhl;lg;gl;Ls;sJ.



*tiuglk; -4*
*%yk; -juTg; gFg;gha;T*

Nffhiy khtl;lj;jpy; nrq;fgpyepw kz;> nrk;kQ;rs; nghl;Nrhypf; kz;> nrq;fgpy Nyhk; kz;zhdJ NtWgl;l msTfspy; muehaf;f > Nffhiy gFjp rhu;e;J fhzg;gLfpd;wJ. ,jid tiuglk; - 5 fhl;Lfpd;wJ. Vida gFjpfspy; nrk;kQ;rs; nghl;Nrypf; kz;Nz ngUk;ghYk; fhzg;gLfpd;wJ. ,jdbg;gilapy; Nffhiy khtl;lj;jpy; fspj;jd;ik nfhz;l kz; mikg;G fhzg;gLfpd;wJ. ,k;kz; mjpfsT fspj;jd;ikapid nfhz;bUg;gjhy; fspkz;zpy; gUg;nghUl;spd; msT 0.002 kpy;ypkPw;wu; tplf; FiwthfK. vdNt fpilf;fg;ngWfpd;w ePupid ,t; kz; CLUttplhJ. jd;Ds;Ns ,ad;wtiu Nrfupj;J itj;jpUf;Fk; ePupd; msT mjpfupf;Fk;NghJ kz; tpuptilAk;. (Moormamm.F.R. & Panabokke, 19961 ) ,jdhy; epyr;rupT Vw;gLk;. vdpDk; xNu jd;ikahd fsp kz; fhzg;gLfpd;w NghJk; epfo;Tfspd; vz;zpf;if ,luPjpahf NtWgLLtjhy; kz;zpd; jd;ikapdf; fhl;bYk; NtW fhuzpfSk; nry;thf;Fr; nrYj;Jfpd;wJ vdyhk;.

<table>
<tr><td>



கேகாலை மாவட்டத்தின் மண் வகைகள்
</td><td>



கேகாலை மாவட்டத்தின் கல்லியல் அமைப்பு
</td></tr>
</table>
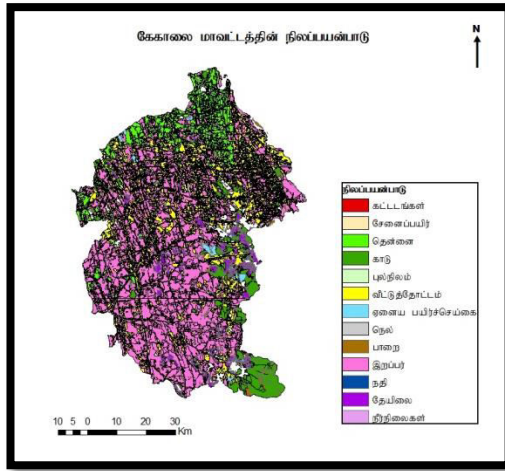
*tiuglk; - 5*          *tiuglk; - 6*

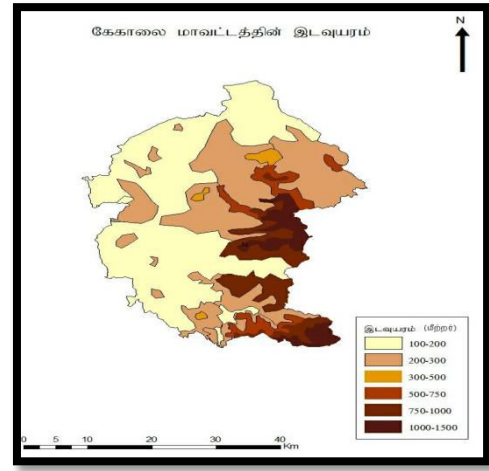*%yk; -juTg; gFg;gha;T*          *%yk; -juTg; gFg;gha;T*

Nffhiy khtl;lj;jpy; jPg;ghiw kw;Wk; cUkhwpa ghiw vd;gd fhzg;gLfpd;wd. ,jid tiuglk; - 6 fhl;Lfpd;wJ ,q;F khgps; ie];> rhNzhifw;w> Fthl;irw> Nfhz;gpsd; Mfpa cUkhwpaghiw mikg;G kpfg;gue;J gl;l mstpYk; rpy ,lq;fspy; jPg;ghiwahd fpiwl;; ghiwfSk; cz;L. ,t;tpU gpujhd ghiwaikg;Gk;> td;jd;ikg;ghiwfs; (Hard Rocks) MFk;. ,it thdpiahy; mopjy; nraw;ghl;bw;F vLf;fpd;w fhy msTk; mjpfkhfk;. ,f; fhuzq;fshy; cUkhwpa ghiwfspy; nghJthfNt epyr;rupT epfo;Tfs; Fiwe;j mstpNyNa eilngWfpd;wd.

Nffhiy khtl;lj;jpy; epyr;rupT epfo;Tfs; mjpfk; epfo;tjw;F Kiwaw;w tptrha eltbf;iffs; fhuzk; vd Neu;fhzy; %yk; mwpag;gLfpd;wJ. Nffhiy khtl;lj;jpd; cauk; $ba fpof;Fg;gFjp rhu;e;J ngUkstpy; ,wg;gu> tPl;Lj;Njhl;lKk; Nkw;nfhs;sg;gLfpd;wJ. mj;Jld; Njapiy> fhLfs;> mjpfsT FbapUg;G vd;gdTk; mikag;ngw;Ws;sJ. ,jid tiuglk; -7 fhl;Lfpd;wJ. Nffhiy khtl;lj;jpy; xNu ghq;fhd epyg;gad;ghl;Lj;jik fhzg;gLfpd;w NghJk; fpof;Fg;gFjp rhu;e;J epfo;Tfs; mjpfKk; Nkw;Fg; gFjpfs; rhu;e;J FiwthfTk; fhzg;gLfpd;wd. Neu;fhzypy; ,Ue;J ngwg;gl;l Kbitfnfhz;L Nehf;Fk;NghJ epyg;gad;ghL Nffhiy khtl;lj;jpd; epyr;ruptpdij J}z;LfpdwJ. vdpDk; ,luPjpahf epfo;Tfs; NtWgLtpjpy; NtW fhuzpfSk; nry;thf;F nrYj;Jfpdwd vdyhk;.
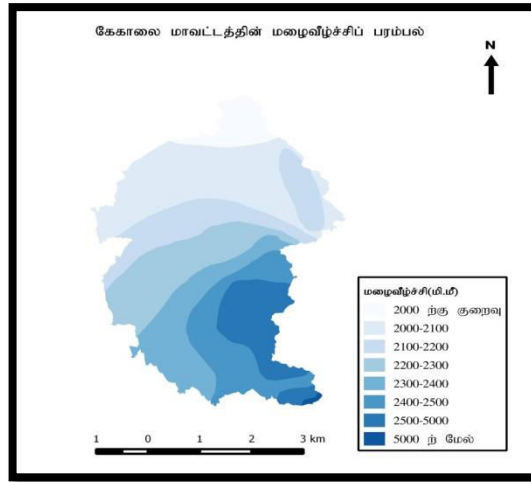
*tiuglk; -7*

*%yk; -juTg; gFg;gha;T*

*tiuglk; -8*

*%yk; -juTg; gFg;gha;T*

Nffhiy khtl;lj;jpd; fpof;Fg;gFjpahdJ kpfTk; cauk; $ba gFjpahFk;. Nkw;FgFjpahdJ gbg;gbahf cauk; Fiwtile;J nry;Yk; gFjpahfTk; fhzg;gLtjid (tiuglk; -8) mtjhdpf;f Kbfpd;wJ. mjpfsT epyr;rupTfs; ,lk;ngWk; gFjpfs; caukhd fpof;Fg; gFjpfshfTk;> Fiwthf epyr;rupT epfOk; gFjpfs;> Nkw;Fg;gFjpfshfTk; fzq;gLfpd;wJ. mjhtJ kpff;$ba caukhdJ 500m-1500m MFk;. ,g;gFjpapNyNa muehaf;fhfTk; cs;sl;lq;Ffpd;wJ. vdNt muehaf;f gpuNjr nrayfj;J epyr;rupT epfo;T kpfmjpfk; eilngWtjw;F cauk; fhuzk; vdyhk;. tlNkw;Fg;gFjpahdJ 100- 200 kPw;wUf;F ,ilg;gl;l mstpy; fhzg;gLfpd;wJ. ,q;F epyr;rupT epfo;Tfspd; vz;zpf;if Fiwthf; fhzg;gLwd. ,t;tifapy; cauj;jpidAk; epyg;gad;ghl;ilAk; Nehf;Fk;NghJ cau;gFjpfspy; Nkw;nfhs;sg;gLk; Kiwaw;w tptrha eltbf;if epyr;ruptpid J}z;Lfpd;wJ vdyhk;. vdNt cauq;$ba gFjpfspy; mjpfsT epyr;rupTfSk;> cauk; Fiwe;j gFjpfspy; Fiwthd mstpy; epyr;rupT Vw;gLtjhy; epyr;rupT epfo;Tfs; mjpfsT eilngWtjpy; ,lcauk; gpujhd nry;thf;F nrYj;Jfpd;wJ vdyhk;.

epyr;ruptpid J}z;Lk; fhuzpfspy; gpujhd fhuzpahf kioPo;r;rp fhzg;gLfpd;wJ. me;j tifapy; Nffhiy khtl;lj;jpd; ruhrup kioPo;r;rpahdJ 2493 kPy;ypkPw;wu; MFk;. ,k; kioPo;r;rp msthdJ 2000 - 5000 kPy;ypkPw;wu; tiu ,lj;jpw;F ,lk; NtWgLfpd;wJ. Fwpg;ghf njd;fpof;F 5000 kpy;ypkPw;wu; kioPo;r;rpAk;; tlNkw;F rhu;e;j 2000 kpy;ypkPw;wu; kioPo;r;rpAk; epyTTjid mtjhdpf;f KbfpwJ. nghJthf fpof;F kw;Wk; njd; gFjp rhu;e;j 2100-3000 kpy;ypkPw;wu; tiu kioPo;r;rp fpilf;fpd;wJ. ,jid tiuglk; -9 fhl;Lfpd;wJ.

*tiuglk; -9*

*%yk; -juTg; gFg;gha;T*

Nffhiy khtl;lj;jpd; Nkw;F kw;Wk; tlNkw;Fg; gFjprhu;e;J 2978 kpy;ypkPw;wu; kiotPo;r;rp mjpfk; fpilf;fg;ngWfpd;w NghJk; jho;epykhf fhzg;gLtjdhy; epyr;rupT epfo;Tfs; Fiwthf eilngWfpd;wJ. vdpDk; muehaf;f gFjpru;e;J Vida gFjpfSld; xg;gpLkplj;J kiotPo;r;rpasT Fiwthff; fhzg;gLfpd;wJ.; Vida gFjpfsp;y; kiotPo;r;rp $lf;fpilj;jhYk; epfo;Tfs; muehaf;f gFjp rhu;e;Nj mjpfk; cs;sJ. ,jw;Ff; fhuzk; muehaf;fg;gFjpapd; rha;Tj;jd;ik mjpfkhfk;. epyr;rupTfs; Nffhiy khtl;jpy; epfo;tjw;F Kiwaw;w tptrha eltbf;if> kuj;jpd; Fiwthd kz;mikg;G ,rha;Tj;jd;ik> vd;gd fhuzq;fshfk;. Fwpg;ghf Nffhiy khtl;jpd; fpof;Fg; gFjpfspy; epyr;rupTfs; mjpfk; eilngWk; fhuzk; rha;Tj; jd;ikNa MFk;

2000 − 2016 Mk; Mz;bw;F ,ilapy; ,lk;ngw;w epyr;rupT epfo;Tfs; gpuNjr uPjpapapYk; jdpkdpjd; rhu;e;Jk; gy;NtW tifahd ghjpg;gid cz;Lgz;zpAs;sJ. me;j tifapy; capu;g;g;ghjpg;G> cilik ghjpg;G> cl;fl;likg;G ghjpg;G> nghUshjhug; ghjpg;Gf;fs;> csuPjpahd ghjpg;Gf;fs; vd;gtw;iw Vw;gLj;jpAs;sJ.
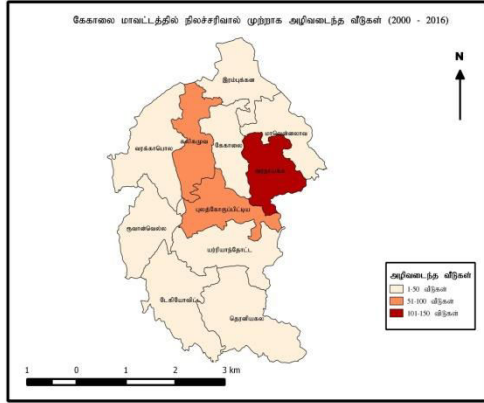
*ml;ltiz-1.2 Nffhiy khtl;jp;y; epyr;ruptpdhy; Vw;gl;l ghjpg;Gf;fs;*

| gpuNjr nrayfh;gphpT | capu;,og;G | fhak; | fhzhy; NghNdhu; | Kw;whd tPl;L mopTfs; | GFjpastpyd tPl;Lr; Nrjk; | ghjpf;fg; gl;lth;fs; |
|---|---|---|---|---|---|---|
| muehaf;f | 48 | 0 | 113 | 130 | 280 | 4775 |
| Gyf;NfhFg;gpl;ba | 18 | 5 | 2 | 53 | 201 | 3581 |
| NlfpNahtpl;l | 4 | 3 | 1 | 40 | 220 | 4437 |
| njudpafy | 0 | 3 | 0 | 14 | 244 | 3023 |
| fypfKt | 4 | 6 | 0 | 99 | 35 | 2492 |
| Nffhiy | 3 | 0 | 0 | 20 | 250 | 3209 |
| khntd;;dyht | 0 | 0 | 0 | 17 | 138 | 1906 |

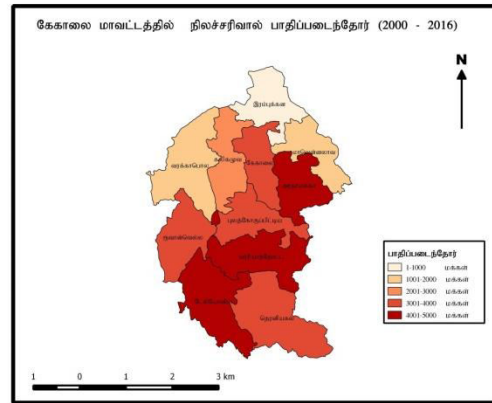| | | | | | |
|---|---|---|---|---|---|
| ,uk;Gf;fd | 0 | 0 | 0 | 7 | 17 | 281 |
| &thd;nty;y | 0 | 0 | 0 | 11 | 686 | 3108 |
| tuf;fhnghy | 1 | 0 | 0 | 30 | 55 | 1007 |
| ah;hpahe;Njhl;l | 1 | 5 | 0 | 31 | 382 | 4175 |

*%yk; -mdu;j;j Kfhikj;Jt epiyak;,2016*

Nffhiy khtl;lj;jp;y; epyr;ruptpdhy; Vw;gl;l ghjpg;Gf;fs; tiuglk;-10,11,y; fhl;lg;gl;Ls;sJ.
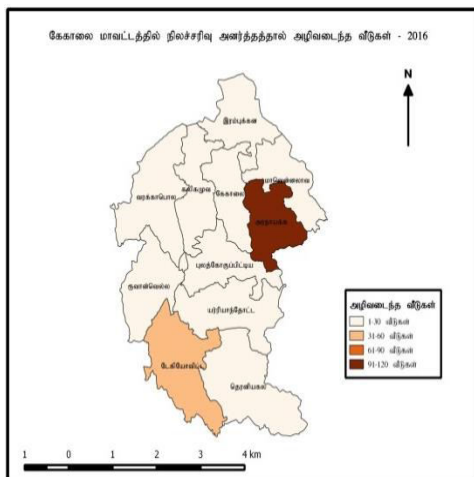


*tiuglk;--10*

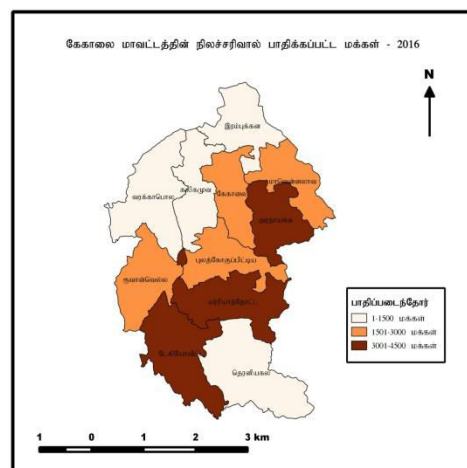*%yk; -juTg; gFg;gha;T*



*tiuglk;--11*

*%yk; -juTg; gFg;gha;T*

,f;fhyg;gFjpapy; 298 tPjpfs; ghjpf;fg;gl;Ls;sd. epyr;rupT fhuzkhf new; gapu;r;nra;ifapy; jq;fpapUf;Fk; 31 FLk;gq;fs; ghjpf;fg;gl;Ls;sd. mj;Jld;3 nff;uau; Vida gapu;fs; moptile;Js;sd. 2006 ,y; epfo;Tfspd; vz;zpf;if mjpfkhfTk; 2016 ,y; ghjpg;gpd; jd;ik mjpfkhfTk; cs;sJ. me;j tifapy; rpy ghjpg;Gj; jd;ikfs; tiuglk;-12,13,14,y; fhl;lg;gl;Ls;sd.
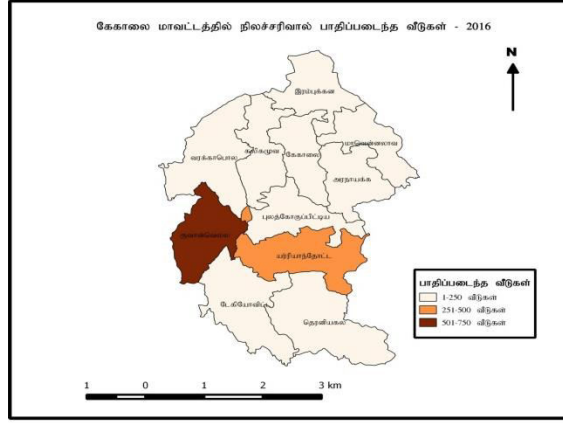


*tiuglk;-12*
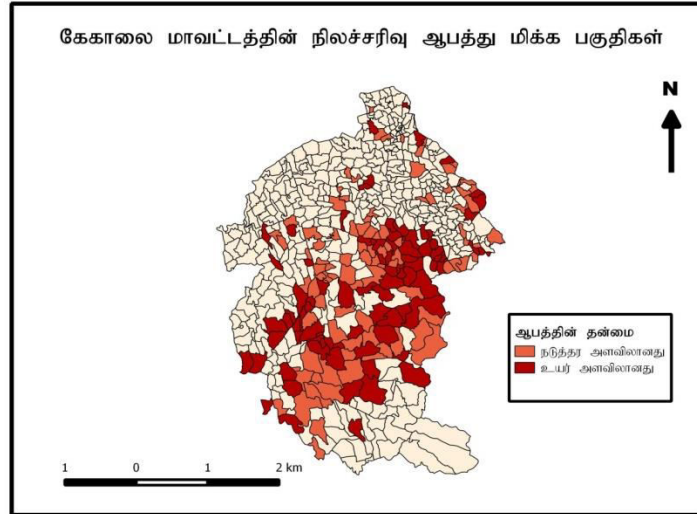
*%yk; -juTg; gFg;gha;T*



*tiuglk;-13*

*%yk; -juTg; gFg;gha;T*

*tiuglk;-14*

*%yk; -juTg; gFg;gha;T*

ghjpg;gpd; jd;ikapidf;nfhz;L Mgj;jpd; jd;ikahdJ fpuhkNrtfu; gpupT uPjpapy; eLj;ju mstpyhd ghjpg;G> cau; mstpyhd ghjpg;Gf;fspd; gpuNjrq;fs; njhlu;ghd tpguk; tiuglk;-15,y; fhl;lg;gl;Ls;sJ.



*tiuglk;-15*

*%yk; -juTg; gFg;gha;T*

## KbTiu

Nffhiy khtl;lj;jpd; epyr;rupT epfo;Tfs; njhlu;ghf Nkw;nfhs;sg;gl;l ,t;tha;tpy; 2000 – 2016 Mk; Mz;bw;fpilapy; 227 epyr;rupT epfo;Tfs; gjpthfpAs;sd. ,t; epyr;rupT epfo;Tfs; eilngw;w gpuNjr nrayh; gpuptpy; muehaf;f mjp $ba epfo;Tfs; (56 epfo;Tfs;) eilngw;w gFjpahFk;. Nffhiy khtl;lj;jpd; fpof;F gFjp rhu;e;J Fwpg;ghf muehaf;fg;gpuNjr nrayh; gpupT kw;Wk; mjid mz;kpj;J epyr;rupT epfo;Tfs; mjpfk; eilngw gpujhd fhuzk;

rha;Tj;jd;ik (,lcauk;) MFk;. vjpu;fhyj;jpy; ,t; epyr;rupT mdu;j;j ghjpg;Gf;fis jzpg;gjw;fhd gupe;Jiufs; fPNo Kd;itf;fg;gl;Ls;sd.

- Nffhiy khtl;lj;jpd; fpof;Fg;gFjp rhu;e;J mjpfsT epyr;rupT epfo;Tfs; eilngWtjdhYk;> ,g;gFjp rhu;e;J kPs;fhlhf;fk; nra;jy; mj;Jld; Nffhiy khtl;lj;jpy; Nridg; gapu;r;nra;ifia Nkw;nfhs;NthUf;F khw;Wj; njhopy;tha;g;Gf;fis cUthf;fpf; nfhLj;jy;

- muehaf;f , Gyf;NfhFg;gpl;ba gFjprhu;e;J Nkw;nfhs;sg;gLk; Kiwaw;w ghiw mfo;tpid cldbahfj; jLj;jy.; Vnddpy;; Nffhiy khtl;lj;jpy; mjpfsT Cutting failure eilngWfpd;wJ ,t; Cutting failure ,idg; ghiw mfo;T ,yFthfj; J}z;Lk;

- Nffhiy khtl;lj;jpy; muehaf;f gpuNjrj;jpy; gy gFjpfspy; Mgj;J kpf;f gFjpfs; vd khtl;lr; nrayfk; milahsg;gLj;jpf; $wpAs;sJ vdpDk; kf;fs; kPz;Lk; mg;gFjpapy; kPsf;Fbaku;j;jg;gLfpd;wdu;. ,g; gFjpfspy; kPs; FbNaw;wr; nraw;ghl;il mur rl;;lj;jpd; %yk; jilnra;jy;

- tPl;Lj;NjhI;lk; kw;Wk; Nridg;gapu;r;nraif vd;gjpy; ngUk;ghYk; FWfpafhyg; gapu;fNs Nkw;nfhs;sg;gLfpd;wd. ,jw;Fg; gjpyhf ePz;l fhyg; gapu;fis mwpKfk; nra;jy; Ntz;Lk;. fpof;Fg;gFjp rhu;eJ mjpfsT epfo;Tfs; eilngWfpd;wd. vdNt fpof;Fg;gFjp rhu;e;J fl;lhag;gbf;fl;L Ntshz;ik Kiwia mwpKfk; nra;jy;

- Nffhiy khtl;lj;jpy; muehaf;f , Nffhiy> Gyf;NfhFg;gpl;ba gFjpfspy; fopT ePu;f;Foha;fs; ghiwfspd; fPo; Foha;%yk; nry;fpd;wJ. ,f;Foha;fs; nghUj;Jjy; jpUj;jg;gzpfs; Nkw;nfhs;sy; vd;gtw;why; mbfb epyj;ij mfo;;jy;> cilj;jy; Nghd;w nraw;ghLfs; eilngWfpd;wd. ,tw;iw ,ad;wtiu Fiwj;Jf;nfhs;sy;

- Nffhiy khtl;lj;jpy; mupf;fg;gl;l epyq;fs; fhzg;gLfpd;wd. Fwpg;ghf CthNfy; (Uva Kale) gFjp mupf;fg;gl;l epyk; MFk;. ,q;F ,yFthf epyr;rupT Vw;gLfpd;wJ. ,g;gFjpapy; Gy; epyq;fis cUthf;Fjy;

- nghJthf ,t; khtl;lk; njd;Nkw;F jho;epyj;jpy; mike;jpUg;gjdhy; tPjppfs; mikf;Fk; NghJ rha;T jd;ikf;F Vw;g tPjpfspid mikj;jy;. mj;Jld; epyr;rupT mdu;j;jk; njhlu;ghd tpopg;Gzu;it kf;fs;> ghlrhiy khztplj;jpy; cUthf;Fjy;.

,e;j tifapy; Nffhiy khtl;lj;jpy; epyr;rupT epfo;Tfs; ,k;khtl;lj;jpd; mgptpUj;jpiaAk; kf;fs; tho;thjhuj;ijAk; ghjpg;g;jhy; NkNy Kd;itf;fg;gl;l gupe;Jiufs; ghjpg;gpd; msitf; Fiwg;gjd; mgptpUj;jpf;Fk; top nra;Ak; vd ek;gyhk;.

## Reference

Bandara.R , (2015) ,'' Overcoming Landslide Issues and Effects " National Building research organization in Sri Lanka.

District Secretariat of Kegall District , "Statistical Hand Books of Kegalle District "2000 ,2001 ,2002, 2003, 2004, 2005, 2006, 2007 ,2008 ,2009, 2010 ,2011 ,2012 ,2013 ,2014, 2015 and 2016 Planning branch District Secretariat of Kegalle.

Disaster Report, (2016) , National Report on Disaster Risk , Poverty and Human Development Relationship Annual Disaster Report , Disaster Management Centre – Sri Lanka.

Disaster Report, (2016) , National Report on Disaster Risk , Poverty and Human Development Relationship Annual Disaster Report , Disaster Management Centre – Sri Lanka.

Moomann.F.R, Panabokke.C.R, (1961 ), "Soils of Ceylon" , The Government press, Ceylon, on paper Manufactured at the Eastern paper Mills cooporation, Valaichchenai,Ceylon.

Flagelloet.J , Maquaire.O , Martin.B ,Wber.D , (1999), "Landslides and Climatic Conditions in the Barcelonnette and Vars basins [Sourthern French Alps ,France] " , Geomorphology – 30 , PP- 65 -78

Kukemilks.K , Saks.T , (2013) , " Landslide and gully slope erosion on the banks of the Gauja River between the towns of Sigulda and Ligatne " , Estonian Journal of Earth Sciences – 62 , PP – 231-243.