



National workshop and field training
on

“Land disturbance due to soil piping in the Western Ghats”

July 5 and July 6-9, 2017



ESSO – National Centre for Earth Science Studies (NCESS),
Govt. of India



State Disaster Management Authority (SDMA),

Govt. of Kerala

Background

Landslides and floods are common features in the Western Ghats during monsoon. But during the last decade land subsidence due to collapse of subsurface cave and tunnel roofs have largely been reported from various part of Western Ghats of Kerala. The agriculture productivity was affected and the terrain often becomes inhospitable. Development of subsurface tunnels alters the hydrogeology of the area and open wells often becomes unsustainable even during high rains. Formation of underground cavities due to subsurface soil erosion affect the structures and roads on the surface. Subsurface soil erosion was even detected very near to a large earth dam made of local earth in Kerala. The studies conducted by NCESS at the affected sites indicated that the land subsidence and subsurface cavity formation is due to process called “Soil piping”.

Soil piping (tunnel erosion) is the formation of underground tunnels due to subsurface soil erosion. When the tunnel grows bigger and bigger the roof collapses and subsidence occurs. In the Western Ghats, it usually occurs in the lateritic terrains. Land subsidence due to soil piping was first reported in Thirumeni village, Kannur district, where a large ground subsidence occurred in 2005. A detailed field inspection by CESS (now NCESS) indicated that this subsided area is connected with large underground tunnels. In the beginning it was thought that this was an isolated incidence. But subsequently several such incidences were noticed in different part of the highlands. Investigations Carried out by NCESS have indicated that the areas adjoining Kannur/ Kasaragod districts in the Coorg locality of Karnataka are the most infested zones with soil piping. Apart from Kannur and Kasaragod other districts such as Kozhikode, Wayanad, Palakkad, Ernakulam, Kottayam, Idukki, Pathanamthitta are also reported to be prone to soil piping

Realising the seriousness of the problem the NDMA Govt. of India has sponsored a research programme to study soil piping in Kerala highlands during 2012-16. Under this programme a data base of soil piping locations was created, carried out mapping of underground tunnels using geophysical methods, studied the causative factors and finally proposed certain site specific mitigation methods. Further, SDMA, Govt. of Kerala has sponsored a programme in 2017 to follow up the studies on soil piping by NCESS.

Based on the recommendation given by NCESS the state Government has declared “Soil Piping” as a state specific hazard. To address this problem on a larger platform involving many institutions NCESS proposes to conduct a national workshop on soil piping as part of providing awareness to stake holders and also to bring academicians, researchers and officers of line departments together to discuss the related issues.



The workshop is will be held on Wednesday 5th of July 2017 at NCESS, Thiruvananthapuram, Kerala with a field component during 6-9 July, 2017 around Cherupuzha, Kannur District, Kerala.

You are requested to kindly confirm your participation before May 5, 2017 . We are envisaging about 40 participants for the workshop and about 15 for the field programme.

Please mail your confirmation to

G Sankar sankarazhakath@gmail.com (co-chairman),

Mob: 9447008391 & Phone 0471 2511637

Dr. D. S. Suresh Babu dssbabu@gmail.com (Org.Secretary)

Phone 0471 2511504



ई.एस.एस.ओ – राष्ट्रीय पृथ्वी विज्ञान अध्ययन केंद्र
ESSO-National Centre for Earth Science Studies

पृथ्वी विज्ञान मंत्रालय, भारत सरकार
Ministry of Earth Sciences, Govt. of India



केरल राज्य विपदा प्रबंधन प्राधिकरण
Kerala State Disaster Management Authority
केरल सरकार
Government of Kerala

पश्चिमी खाई में मल नल के कारण
स्थलीय खलबली पर राष्ट्रीय संगोष्ठी एवं क्षेत्रीय प्रशिक्षण
**NATIONAL WORKSHOP AND FIELD TRAINING ON
LAND DISTURBANCES DUE TO SOIL PIPING IN THE
WESTERN GHATS**

रजिस्ट्रीकरण फार्म Registration form

नाम :
Name

पदनाम :
Designation

कार्यालयीन पता :
Official address

मोबाइल:
Mobile

ई-मेल :
Email.

प्रतिभागिता विवरण: () कार्यशाला मात्र-(जुलाई 5) रा पृ वि अ कें, तिरुवनन्तपुरम

() कार्यशाला और क्षेत्रीय कार्य-(जुलाई 6-9) चेरुपुष्पा, कण्णूर*

Participation details: () workshop only (July 5) at NCESS, Thiruvananthapuram

() workshop and field work (July 6—9) at Cherupuzha , Kannur®

कृपया उचित (√) करें Please (√) the appropriate

क्या पोस्टर प्रस्तुती में भाग लेते/लेती हैं- जी हाँ ()/ जी नहीं ()

Participating in poster presentation: yes () / no ()

गमन तिथि Arrival date:

गमन विवरण Arrival details

प्रस्थान तिथि Departure date:

प्रस्थान विवरण Departure details:

क्या वास व्यवस्था तिरुवनन्तपुरम में चाहिए: चाहिए/ नहीं चाहिए

Accommodation requirement in Thiruvananthapuram: required / not required:

*पय्यन्नूर तक वोल्वो बस से और चेरुपुष्पा तक एस यू वी से यात्रा और चेरुपुष्पा में होटल में वास की व्यवस्था का प्रबंध रा पृ वि अ कें द्वारा की जायेगी। (तकनीकी कारणों से सीमित संख्या मात्र प्रतिनिधि फील्ड में ले जायेंगे।)

@ Travel by Volvo bus to Payyannur and to Cherupuzha by SUV and accommodation at hotels in Cherupuzha are arranged by NCESS. (Due to technical reasons only limited delegates will be taken to field)

कृपया 5 मई 2017 के पहले यह फार्म निम्न पते पर ई-मेल करें

Please email this form before 5th May 2017 to:

जी शंकर (सह अध्यक्ष) : sankarazhakath@gmail.com

फोन: 04712411637 (का) मोब: 9447008391

G Sankar (Co Chairman): sankarazhakath@gmail.com tel: 0471 2511637 (off) Mob: 9447008391

प्रतिलिपि : डॉ डी एस सुरेशबाबु, (व्य: सचिव) dssbabu@gmail.com

फोन: 04712511504 (का)

CC to Dr. D S Suresh Babu, (Org.Secretary) : dssbabu@gmail.com tel 0471 2511504 (off)