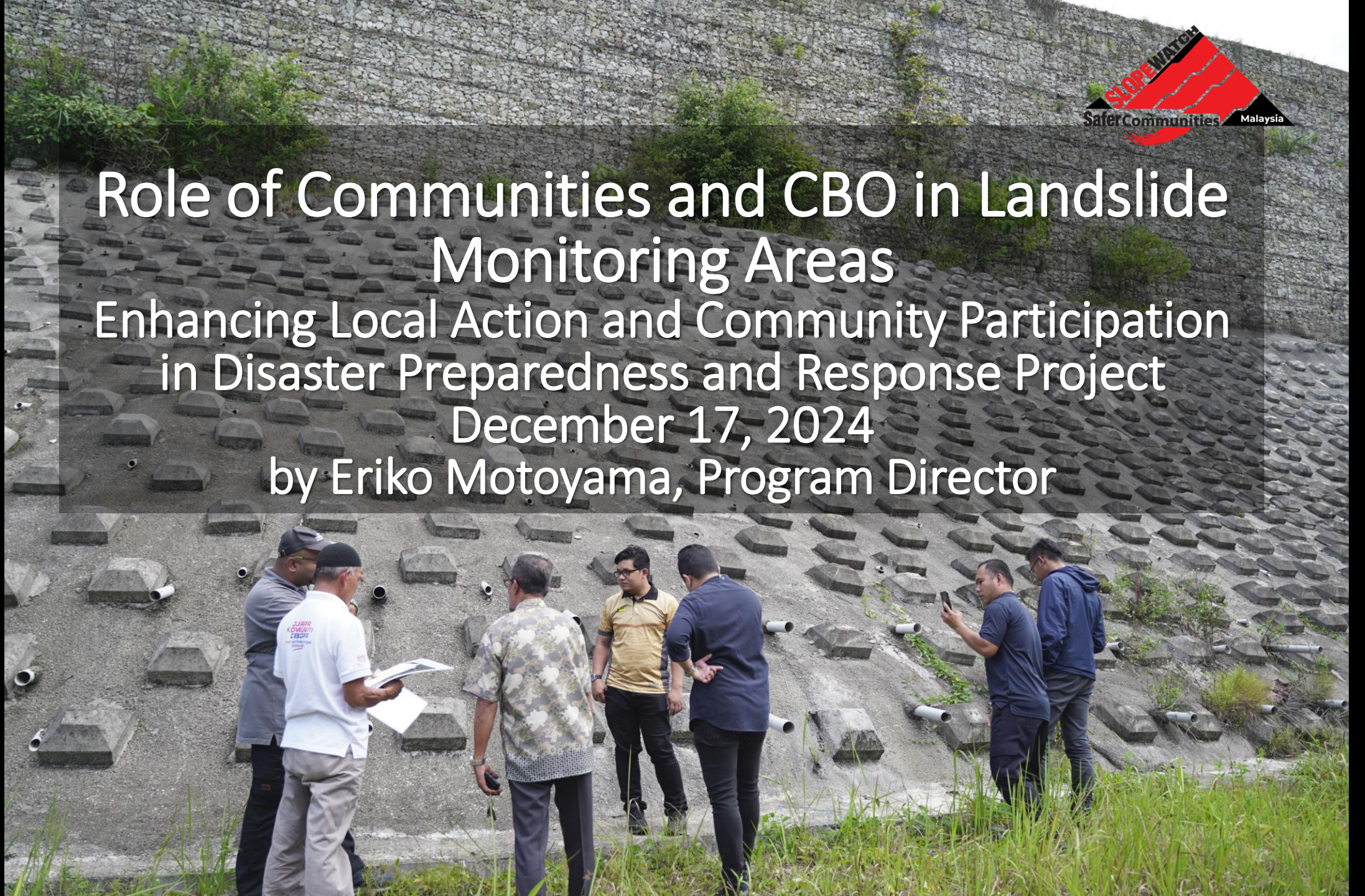


Role of Communities and CBO in Landslide Monitoring Areas

Enhancing Local Action and Community Participation in Disaster Preparedness and Response Project

December 17, 2024
by Eriko Motoyama, Program Director





What is SlopeWatch?

- SlopeWatch was founded in Bukit Antarabangsa by 8 community organizations to prevent future landslides from occurring
- We also work together with other groups in BA such **SeDAR Ulu Klang** (for DRR) and **AJ Rimba** (for land use)

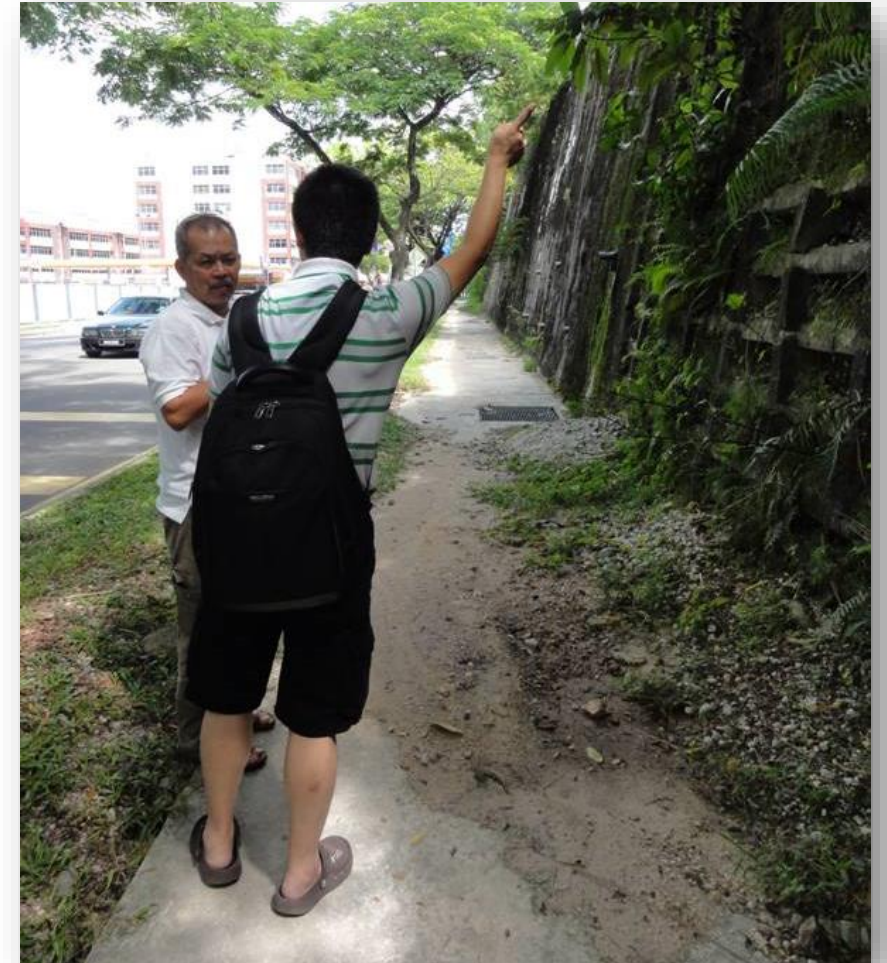
Why Was SlopeWatch Set up?

- Eyewitness accounts report seeing signs of landslides weeks, even months, before disaster hit

What Does SlopeWatch Do?



- It teaches communities about slopes and landslide risk



- Helps residents make reports on signs of slope failures

Importance of Knowing the Signs

- Many of the causes are manmade
- Slopes go through natural wear and tear and need regular maintenance
- Sometimes they fail through external triggers or through lack of maintenance.
- And they show signs

Sinkhole developing under hillside apartment at Ukay Perdana due to broken water pipe

The 1.30pm incident yesterday destroyed the academy's main entrance and guardhouse.

The Kuala Lumpur Fire and Rescue Department said no one was injured due to the incident while officers from Kuala Lumpur City Hall and the Public Works Department conducted slope monitoring works.

Beh said yesterday that initial forensic findings by the Public Works Department indicate that a likely cause of the landslide was a broken underground pipe.

Noting that the department had found evidence of a broken pipe at the scene, he said that this could have contributed to water pooling, leading to the eventual landslide. – The Vibes, April 26, 2023

Related News

MALAYSIA / 3W

Cameron landslide: SAM wants authorities hauled up for over-development in sensitive areas



MALAYSIA / 3W

One dead, four feared buried in landslide at Cameron Highlands



Taman Bukit Permai Landslide (March 2022)



**One of the causes:
Broken drains,
causing water to
go into the ground**

Taman Melawati Landslide (October 2024)



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Taman Melawati landslide caused by clogged drains, says Nanta

FMT Reporters • 15 Oct 2024, 07:00 PM

The works minister says he has directed JKR's slope engineering branch to carry out a detailed assessment.

26
SHARES



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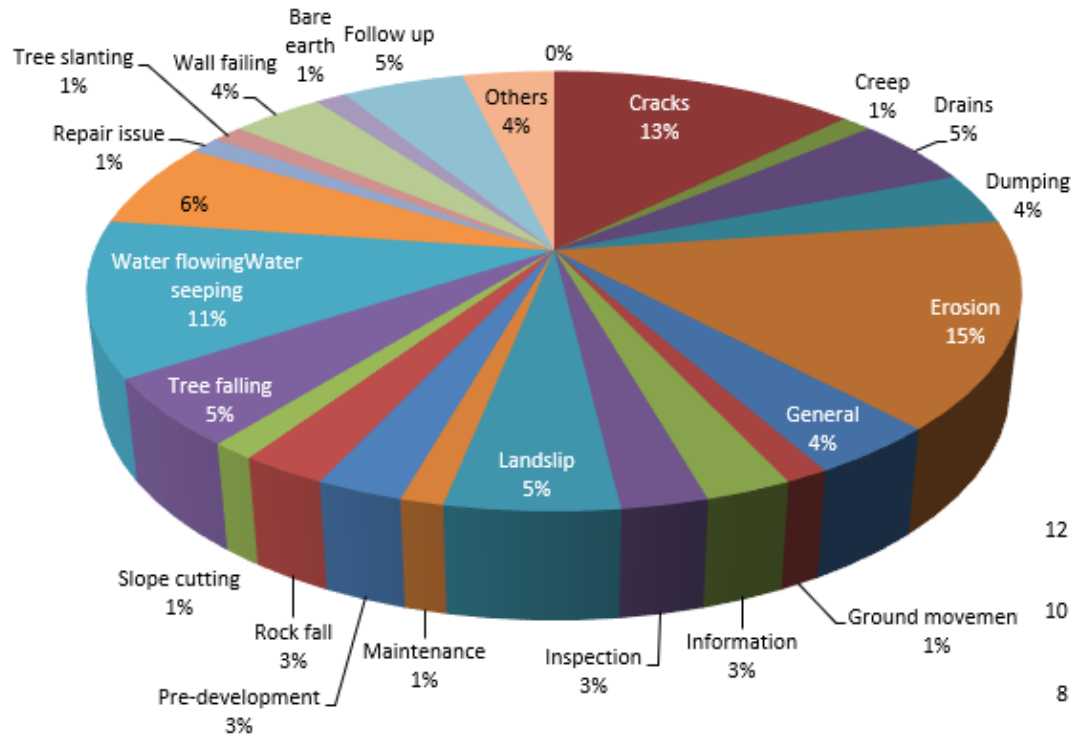
- 1 Man who punched foreigner at KLIA suspended from duties, says Loke
20 Nov 2024, 04:21 PM
- 2 Hassan summoned by PKR's disciplinary board over U Mobile criticisms
21 Nov 2024, 03:36 PM
- 3 Unfair to call me 'munafiq' based on edited news clip, says Anwar
21 Nov 2024, 01:08 PM
- 4 Another men's singles shuttler knocked out of China Masters
20 Nov 2024, 08:04 PM
- 5 Diesel subsidy removal hits Mr DIY's bottom line
20 Nov 2024, 01:21 PM

Special Features



Occupants of 20 houses in Taman Melawati had been ordered to vacate their homes following a landslide in the area. (Bernama pic)

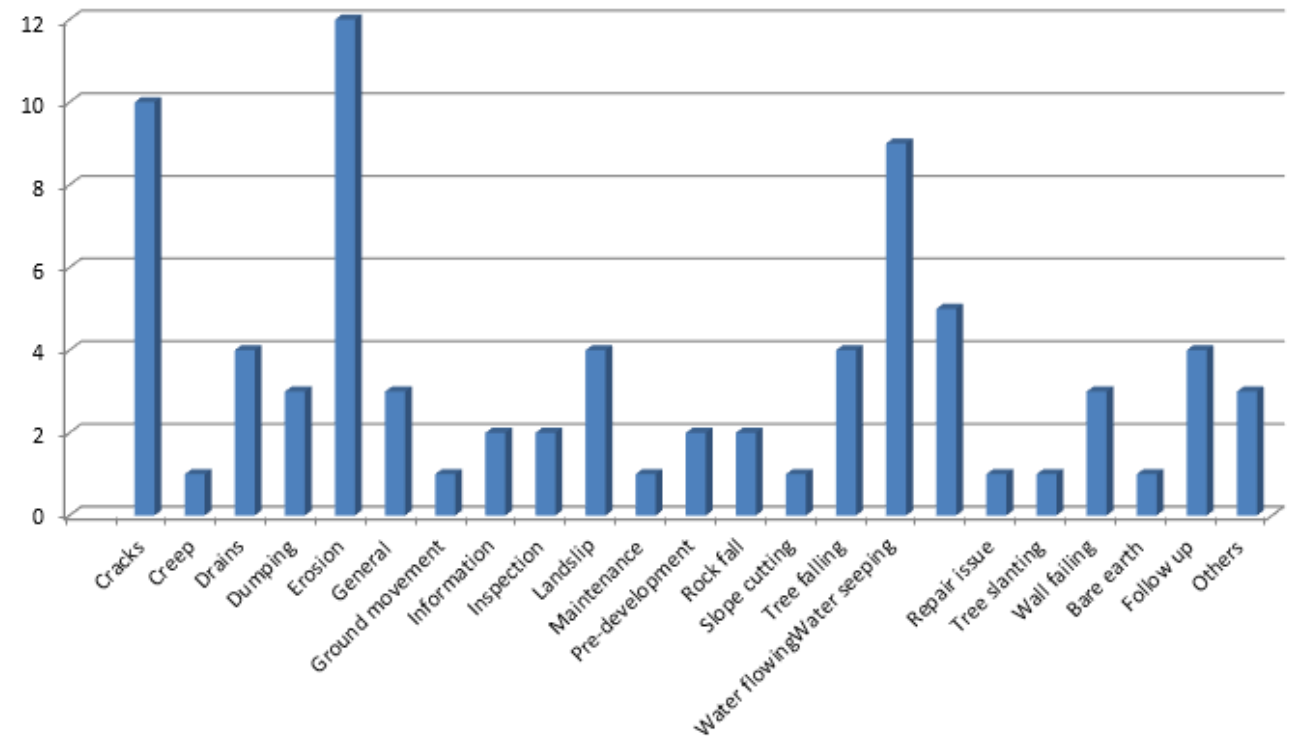
Signs Reported by You (Residents) 2009-2024



Most reported:

Erosion	15%
Cracks	13%
Water flowing	11%
Tree fall	5%
Landslip	5%

*Based on 200 reports



Communities Can Help Reduce Risks of Landslides

- Communities are already reporting, but most of the time they are reporting landslide events **AFTER** they occur
- To prevent property damage and losses, they can report **BEFORE** they happen
- Why should communities monitor?
 - Because communities know their environment best (can detect changes)
 - Local authorities can't be everywhere all the time



Positive Impact of Monitoring



2008 Bukit Mewah (Antarabangsa) landslide

Lebuhraya Ampang-
Hulu Klang (1997)

Taman Hillview
(2002)

Taman Bukit Mewah
(2008)

2009

Highland Towers,
Ulu Klang (1993)

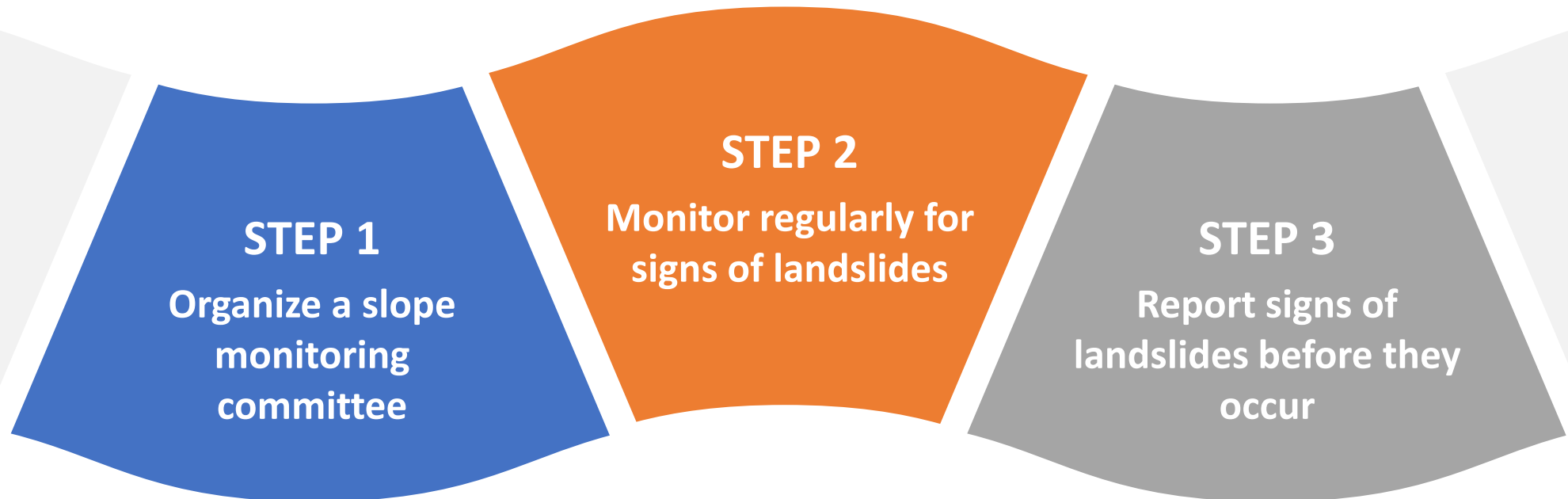
Jalan Wangsa 1,
Bukit Antarabangsa
(1999)

Kg. Pasir, Ulu Klang
(2006)

After 2009, big reduction in
landslide incidents. Risk is still
there, but we managed to reduce
the incidents

So What Can Your Communities Do to Keep Your Slopes Safe?

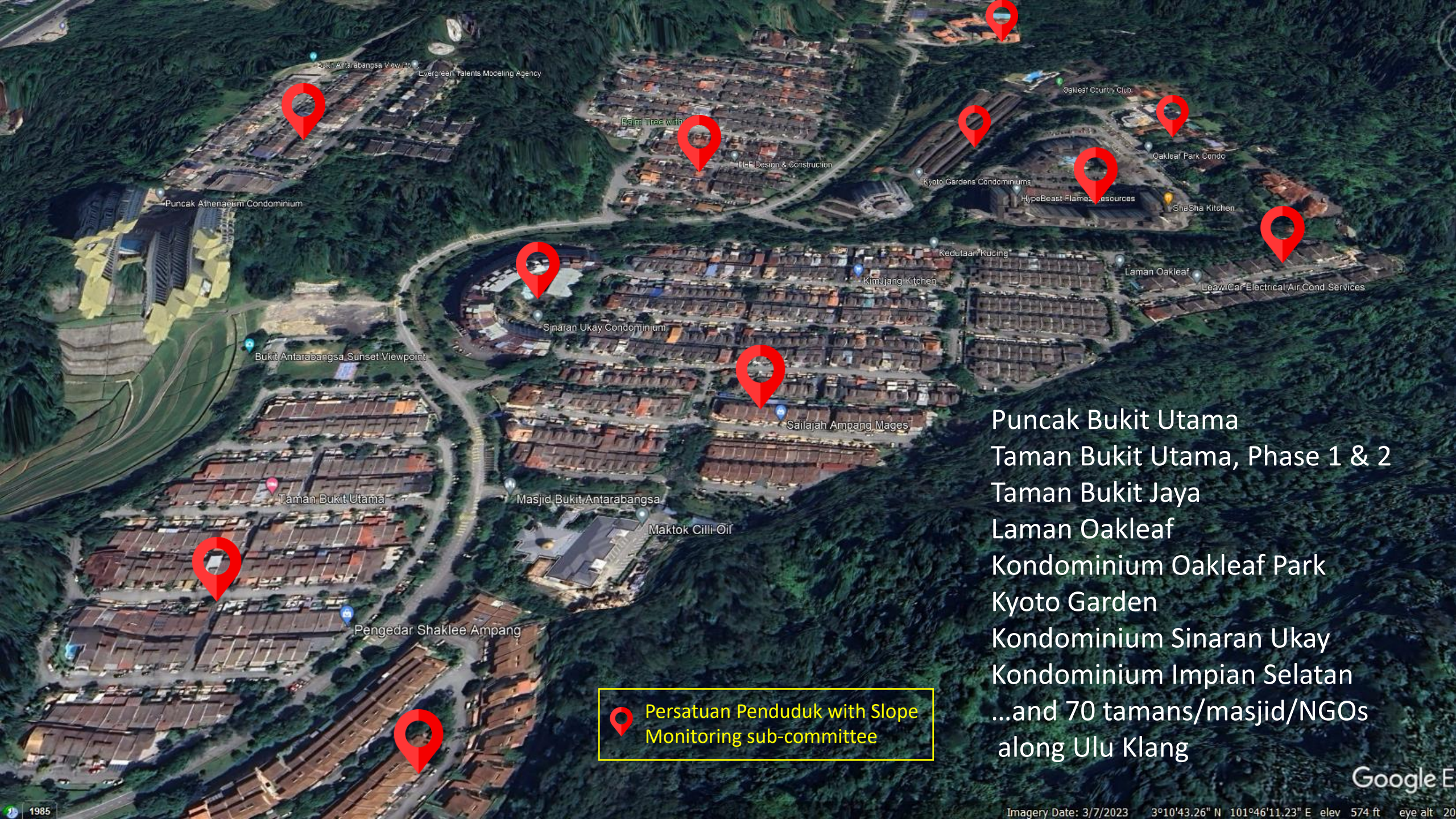
There are 3 steps communities can take:



Step 1: Organize a slope monitoring committee



Persatuan Penduduk Wangsa 5A, Bukit Antarabangsa



Puncak Bukit Utama
Taman Bukit Utama, Phase 1 & 2
Taman Bukit Jaya
Laman Oakleaf
Kondominium Oakleaf Park
Kyoto Garden
Kondominium Sinaran Ukay
Kondominium Impian Selatan
...and 70 tamans/masjid/NGOs
along Ulu Klang



Persatuan Penduduk with Slope
Monitoring sub-committee

Google E

Imagery Date: 3/7/2023 3°10'43.26" N 101°46'11.23" E elev 574 ft eye alt 20

Start with Community Workshop (Gain knowledge)



Taman Melawati Residents Association

Set Up a Slope Monitoring Sub-Committee



- **Encourage residents** in the taman to monitor regularly
- **Include slope maintenance** in gotong royong activities (e.g. clearing slope drains)
- **Share useful information** about slope monitoring and maintenance to the residents
- **Appoint a focal point person** to report signs to Local Authority (PBT)

Community DRR Resource Centre (Bukit Antarabangsa)





Step 2: Monitor Regularly for Signs of Landslides

JT123, Ukay Heights, Ulu Klang



TANDA-TANDA AWAL TANAH RUNTUH

1 Bonjolan di permukaan cerun

2 Rekahan muncul pada cerun

3 Tirisan air

4 Air bertakung di kaki cerun

5 Kerosakan dan longkang tersumbat

6 Serpihan batuan atau tanah di atas cerun

7 Lubang aliran tersumbat

8 Retakan pada dinding bangunan, lantai dan lain-lain struktur seperti pintu dan tingkap sukar ditutup

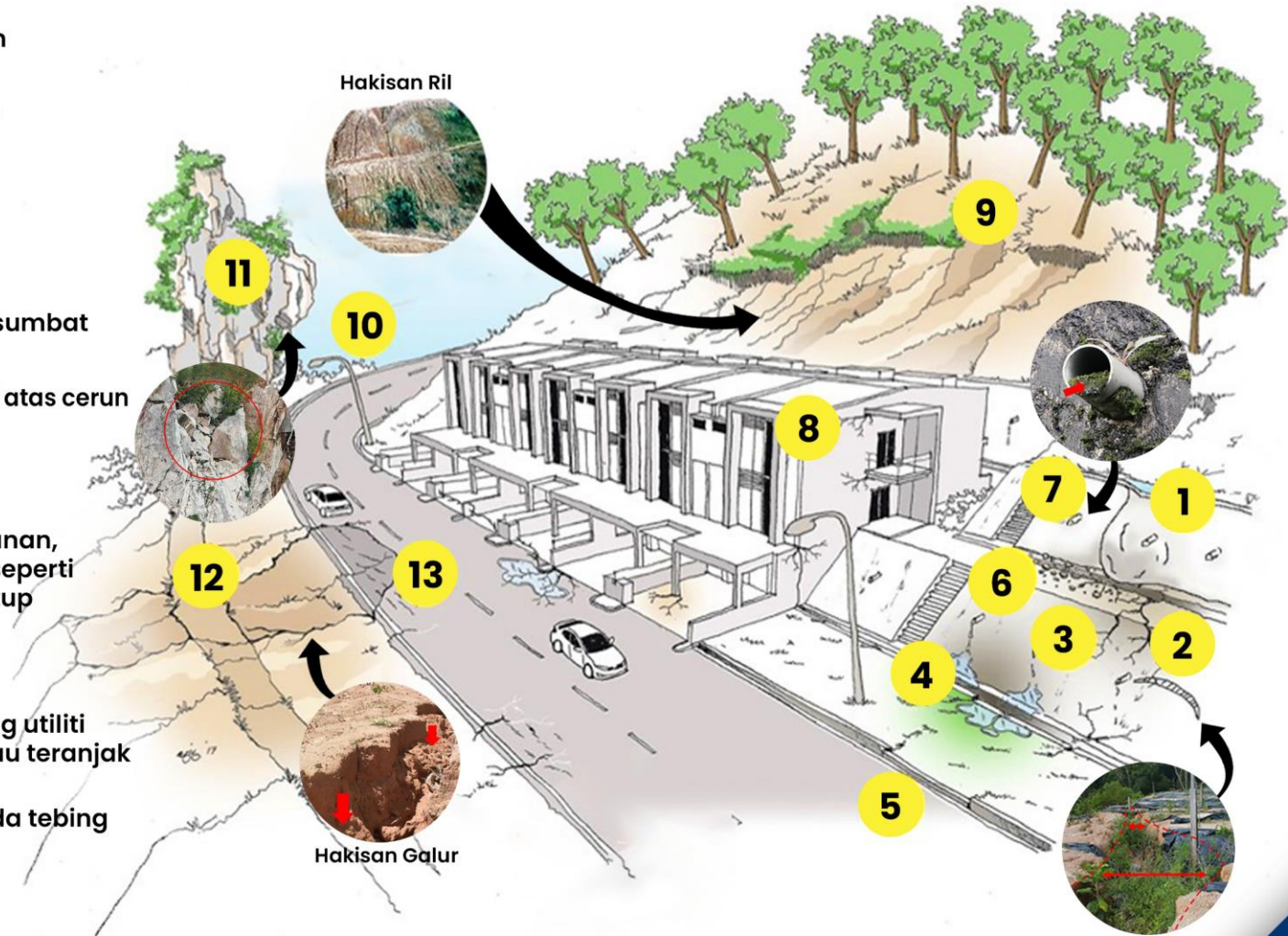
9 Pergerakan tanah

10 Pagar, tembok penahan, tiang utiliti dan pokok yang condong atau teranjak

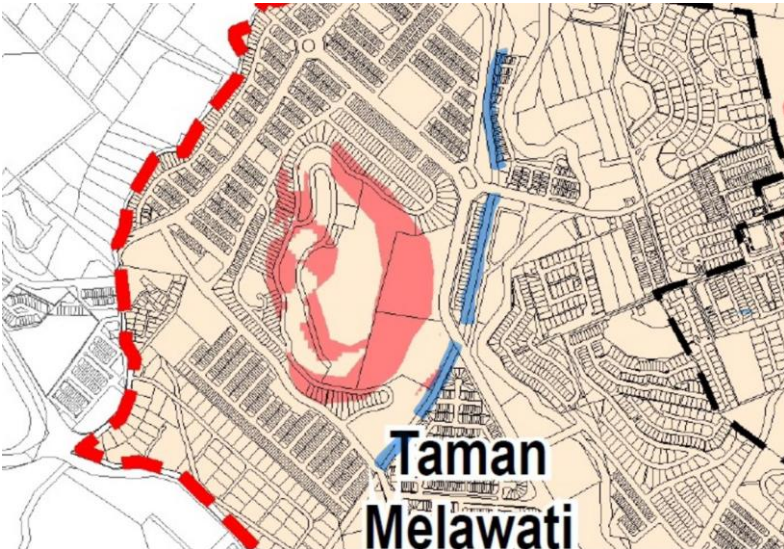
11 Bongkah batuan longgar pada tebing bukit batu kapur

12 Hakisan galur

13 Pembentukan retakan dan semakin melebar (retakan tegangan) pada permukaan tanah atau permukaan berturap seperti jalan, laluan atau apron bangunan dan tanah menjadi mendap



Slope Watching: Looking for Tell-Tale Signs



Rule of Thumb for Monitoring

Check top of slope

Check middle of slope

Check bottom of slope



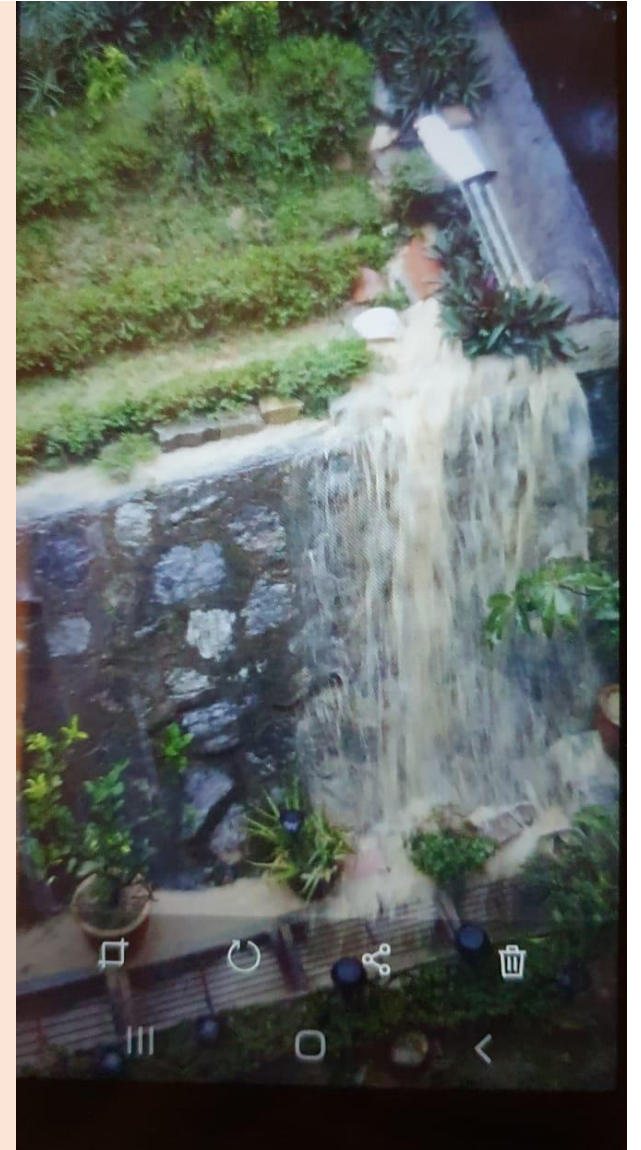
THIS WILL GIVE YOU THE 'BIG PICTURE'



Walls suddenly damp

URGENT SIGNS

- Not all signs are the same
 - Some are more urgent than others
- These should be alerted immediately to your:
 - Fellow neighbours/pengurus/persatuan penduduk, ahli majlis, ADUN, MP, and/or PANTAS Unit of the local authority



New channels of water

TOP



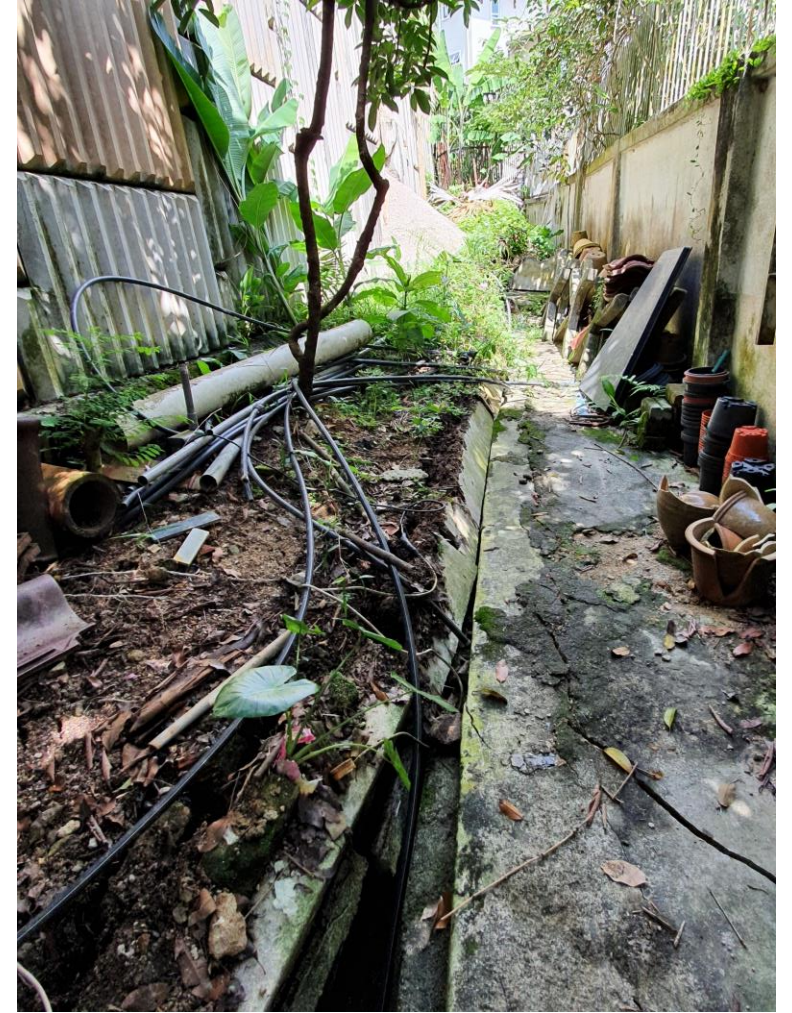
Tension crack

MIDDLE



Movement of wall sections

BOTTOM



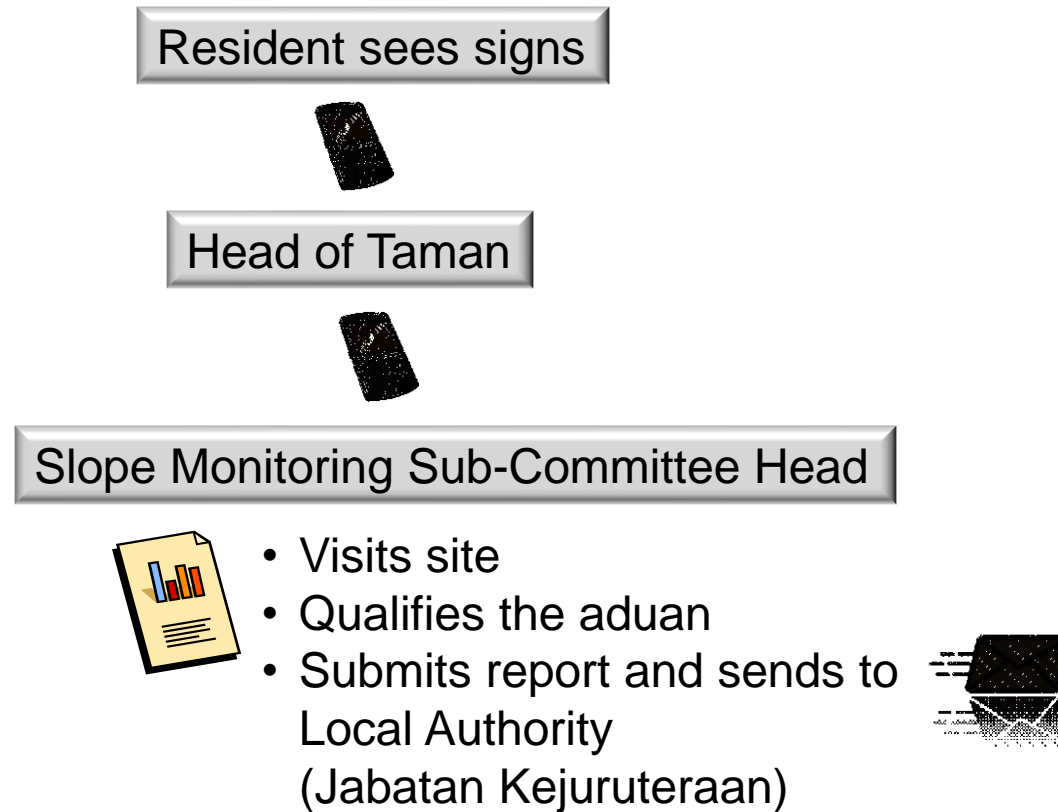
Drains becoming narrower or displaced

A close-up photograph of a person's hands holding a smartphone. The person is wearing a grey long-sleeved shirt. The background is a blurred outdoor setting with greenery. A semi-transparent white rectangular box is overlaid on the image, containing the text "Step 3: Report signs of landslides before they occur".

Step 3: Report signs of landslides
before they occur

SlopeWatch & Community Procedures

Monitoring



Local Authority Procedures

Response?

Local Authority



- Receives report
- Schedules appt with Field Investigation
- Goes to site

Is it Local Authority's jurisdiction and responsibility?

If **YES**:

1. Local Authority proposes solution or refers to geotech engineer
2. Comes up with solution
3. Communicate schedule with aduan proponent
4. Commences work
5. Notifies aduan proponent when work is complete

Local Authority Procedures

Response?

If **NO**, belongs to private slope owner, then:

Local Authority



Slope owner

- Seeks advice from qualified geotech consultant and/or contractor
- Informs Local Authority of the proposed solution

Local Authority

- Notes the proposed solution and gives approval

Homeowner

- Carries out repair works
- Submits Certificate of Completion



**Do this sooner
rather than later.
Slope repair works
can be very
expensive**

Local Authority Procedures

Response?

If **NO**, belongs to third-party slope owner, then:

Local Authority



- Notifies slope owner
- CC copy of notification to aduan proponent

Slope Owner

- Rectifies problem
- Communicates with Local Authority on proposed solution
- Local Authority signs off on completion of solution
- Keeps Maintenance Record

Local Authority

- Informs aduan proponent

Local Authority Procedures

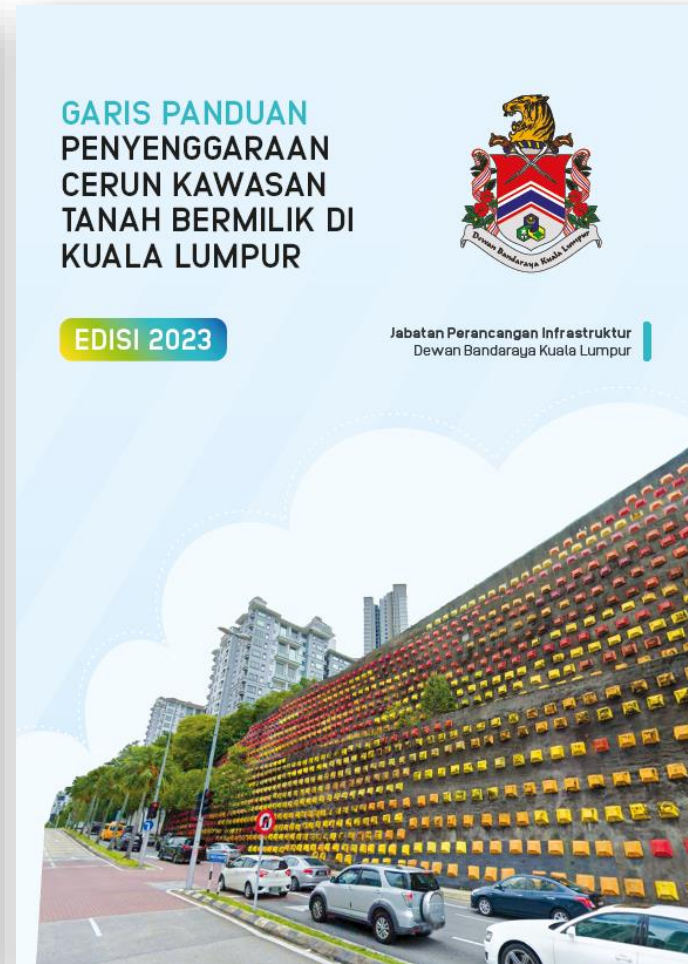
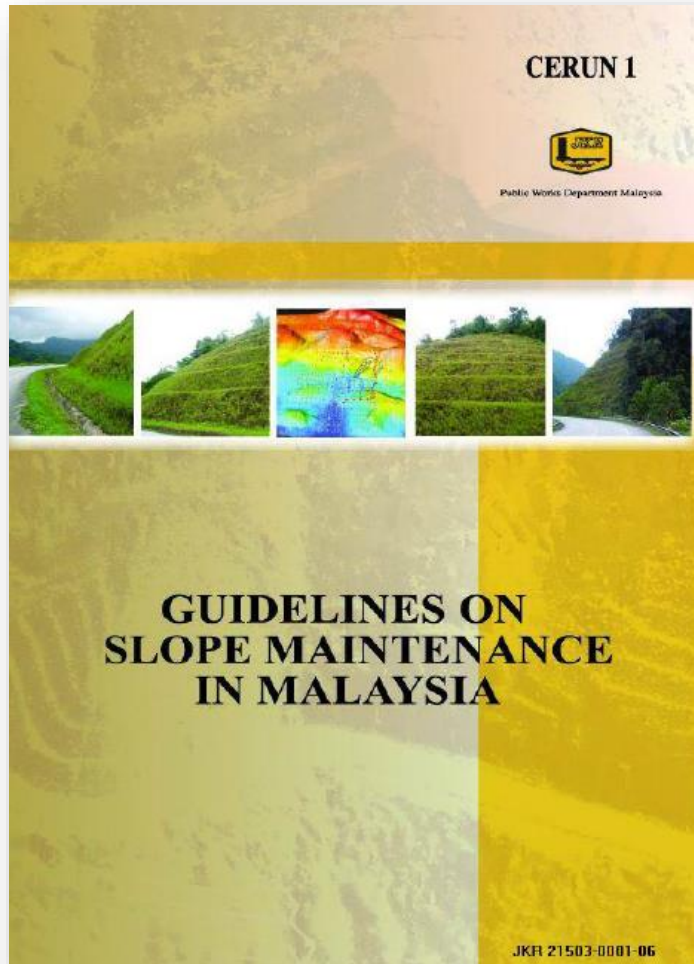
Response?

If **NO**, there is no need for any action, then:

Local Authority

- Informs aduan proponent that there is no slope danger and the case is closed

Checklist for Maintenance



Senarai Semak Oleh Pemilik Tanah Bagi Pemantauan Cerun Secara Rutin (Visual)

Borang ini disediakan bagi tujuan semakan pemilik ke atas cerun dalam kawasan lot persendirian

Nama Pemunya/Penyewa/MB/MC : _____ No. Telefon : _____

Lokasi Cerun (Alamat) : _____

Tarikh Pemantauan : _____ Masa : _____

BIL	PERKARA	PEMANTAUAN		CATATAN
		YA	TIDAK	
1.	Adakah keadaan fizikal tanah di cerun / tembok penahan berubah bentuk dari keadaan asal?			
2.	Adakah terdapat aliran air keluar melalui permukaan tanah berhampiran cerun?			
3.	Adakah terdapat aliran air di bahagian dinding tembok penahan keluar secara berterusan?			
4.	Adakah terdapat paip air atau paip kumbahan yang pecah di kawasan sekitar cerun?			
5.	Adakah pagar, tembok penahan, tiang utiliti (TM, TNB dll) serta pokok berkeadaan condong atau bergerak daripada kedudukan asal?			
6.	Adakah terdapat keretakan pada permukaan cerun, jalan siarkaki, longkang dan bangunan berhampiran?			
7.	Adakah terdapat batu-batuan atau serpihan batu yang longgar / beralih dari kedudukan asal di permukaan cerun?			
8.	Lain-lain (sila nyatakan, jika ada)			

Nota :

- Sekiranya terdapat "Ya" pada ruangan pemantauan dari Jadual di atas, pemilik tanah hendaklah mengambil tindakan pembaikan segera di tapak. (Sila rujuk Perkara 4.3 : m/s 30 – bagi cadangan pembaikan)
- Sekiranya keadaan cerun telah runtuh. (Sila rujuk Perkara 5.0 : m/s 43).
- Borang ini hendaklah disimpan sebagai rekod dan rujukan kepada pemilik tanah.

Source Garis Panduan Cerun Kawasan
Tanah Bermilik - DBKL-EDISI2023:

TIP-TIP PENYELENGGARAAN MUDAH UNTUK MENJAGA KESELAMATAN CERUN ANDA

Tip #1:

Pastikan air dari saluran bumbung mengalir ke dalam longkang dan bukan ke atas tanah bercerun



Tip #2:

Baiki mana-mana paip yang bocor



Tip #3:

Bersihkan longkang dari sebarang halangan seperti sampah, lumpur, ranting-ranting kayu dan daun-daun



Tip #6:

Bersihkan lubang leleh supaya tidak tersumbat dan menghalang aliran air



Tip #7:

Buang pokok yang tumbuh di dinding untuk mengelak akar tumbuhan merekahkan lagi sebarang bahagian yang retak



Tip #8:

Pastikan kawasan cerun yang botak akibat hakisan ditanam semula bagi mengelak hakisan berulang



Tip #4:
Baik sebarang
keretakan di dinding
penahan



Tip #9:
Ganti mana-mana
bahagian dinding
penahan yang rosak



Tip #5:
Siasat punca (tekanan
air atau pergerakan
tanah) sebarang
keretakan pada
dinding sekiranya
terdapat keretakan
yang semakin merekah



Tip #10:
Laporkan sebarang
kejadian batu-batu
bergolek untuk
pastikan ia tidak lebih
membahayakan.
Halang orang ramai
dari mendekati
kawasan tersebut.



JABATAN MINERAL & GEOSCIENCE MALAYSIA

Checklist for Maintenance

- Halangan di dalam saluran cerun
- Saliran longkang rosak
- Keretakan pada cerun atau tembok penahan
- Lubang leleh dan paip saluran tersumbat
- Tumbuhan pada celahan tembok retak
- Permukaan cerun yang terdedah
- Kerosakan pada tembok penahan
- Batuan longgar atau sisa runtuhan cerun
- Paip air bocor
- Lain-lain



Panduan Pemantauan dan Penjagaan Cerun

Borang ini disediakan bagi tujuan panduan pemantauan dan penjagaan cerun kepada pemilik cerun dalam kawasan lot persendirian

Nama Pemunya/Penjawab/MB/MC :

No. Telefon :

Lokasi Cerun (Alamat) :

Tarikh Pemantauan :

Masa :

BIL	PERKARA	PEMANTAUAN		CATATAN
		YA	TIDAK	
1.	Halangan di dalam saluran cerun			
2.	Saliran longkang rosak			
3.	Keretakan pada cerun atau tembok penahan			
4.	Lubang leleh dan paip saluran tersumbat			
5.	Tumbuhan pada celahan tembok retak			
6.	Permukaan cerun yang terdedah			
7.	Kerosakan pada tembok penahan			
8.	Batuan longgar atau sisa runtuhan cerun			
9.	Paip air bocor			
10.	Lain-lain (sila nyatakan, jika ada)			

Nota :

Sekiranya terdapat "Ya" pada ruangan pemantauan dari Jadual di atas, pemilik tanah hendaklah mengambil tindakan pembaikan segera di tapak. (Sila rujuk Perkara 3.5 : m/s 14-23 – bagi cadangan pembaikan)

Source Garis Panduan Cerun Kawasan
Tanah Bermilik - DBKL-EDISI2023:

How to Report Signs of Landslides?

Portal Rasmi
MAJLIS PERBANDARAN AMPANG JAYA

HUBUNGI KAMI FAQ ADUAN DAN MAKLUM BALAS PETA LAMAN

LAMAN UTAMA MPAJ RAKYAT PERNIAGAAN PELAWAT DATA TERBUKA

BUKIT TABUR BANDAR BUNGA TANJUNG BERBAKTI BERSIH & BERBUDAYA STADIUM MPAJ

Hubungi Kami

Jika ada sebarang komen, cadangan atau maklum balas anda boleh menghubungi kami melalui :

1. Alamat dan telefon kami :
MAJLIS PERBANDARAN AMPANG JAYA,
Menara MPAJ Jalan Pandan Utama,
Pandan Indah,
Selangor 55100 Kuala Lumpur

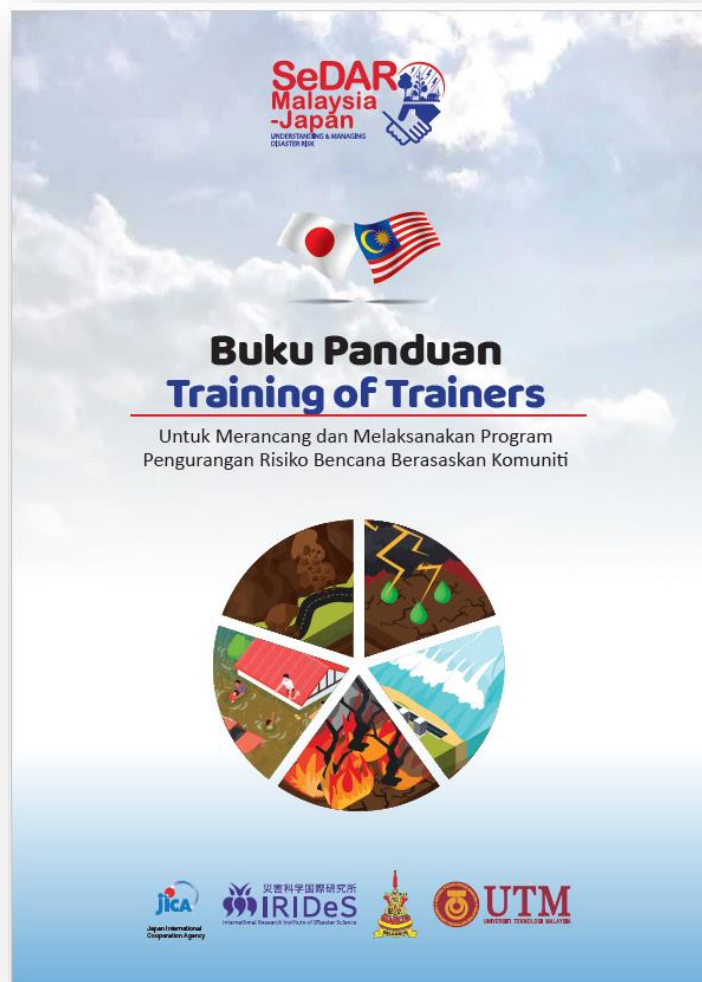
Talian Utama : 03-4285 7333
Faksimili: 03-4296 8050
2. Saluran Aduan kami :
 - Talian Whatsapp Aduan: 019-266 8100
 - Hotline: 03-4296 8100
 - Talian Bebas Tol: 1-800-22-8100

- Local Authority (PBT) hotline
- Report directly to Jab. Kejuruteraan

EMERGENCY:

- 999

3-HELP CONCEPT (practiced in Japan)



6.1 Mewujudkan Pemikiran DRR dan Membangunkan Budaya Komuniti Berdaya Tahan

Terdapat pelbagai jenis bantuan atau sokongan kepada komuniti sebelum atau semasa bencana.

Pelbagai Kategori 'Bantuan'



Bantuan Kendiri

Individu yang dilengkapi dengan pengetahuan dan kemahiran DRR mampu membuat keputusan sendiri dalam menyelamatkan nyawa mereka sendiri semasa kecemasan, termasuk peristiwa bencana



Bantuan Bersama

Ahli komuniti dan organisasi saling membantu dalam tindak balas dan kesiapsiagaan bencana. NGO boleh memainkan peranan penting dalam sokongan



Bantuan Awam

Bantuan rasmi yang diberikan oleh kerajaan, seperti polis, bomba dan pasukan tentera dari semua peringkat pentadbiran