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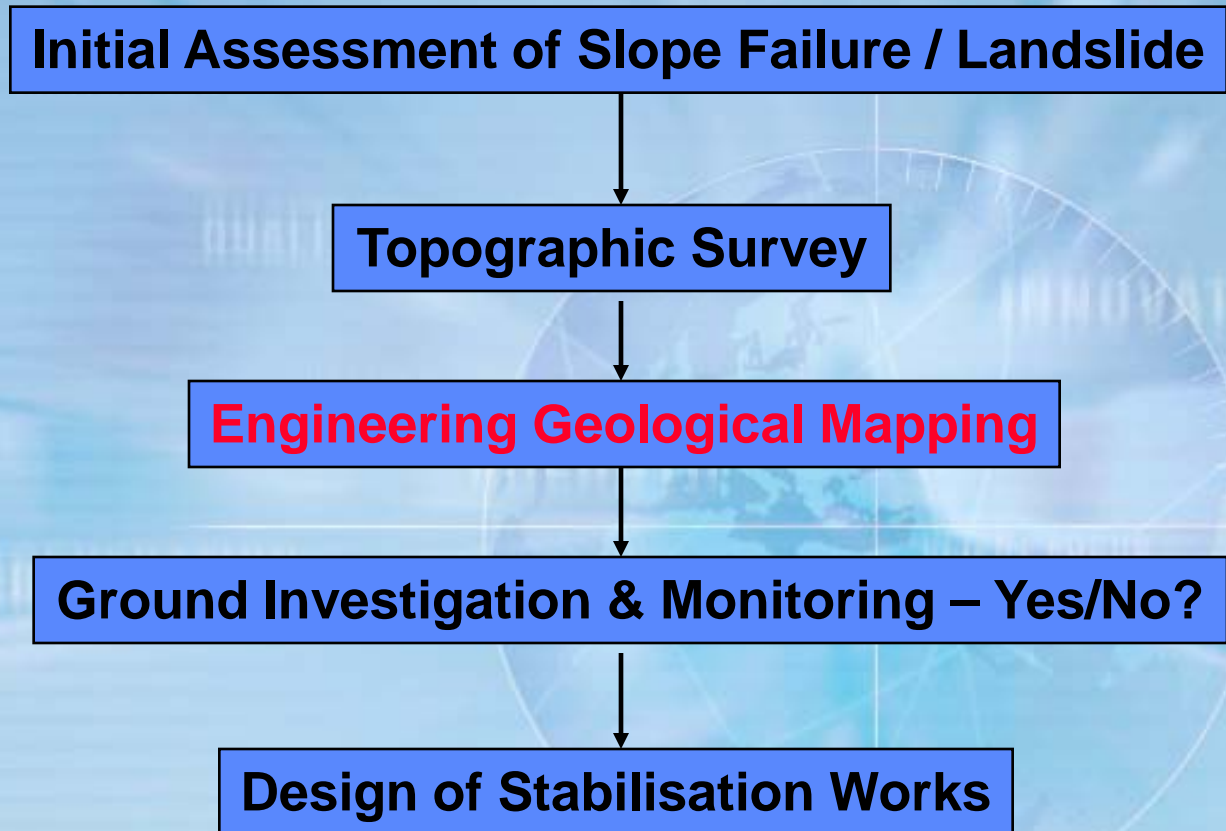
**Mainstreaming Slope Stability Management – Hazard and
Risk Assessment – to Laos Practitioners**

Theme 6

Engineering Geological Assessments

6.2 – Engineering Geological Mapping

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Hydrology (surface water, stream erosion, ground water)

Slope angle & shape

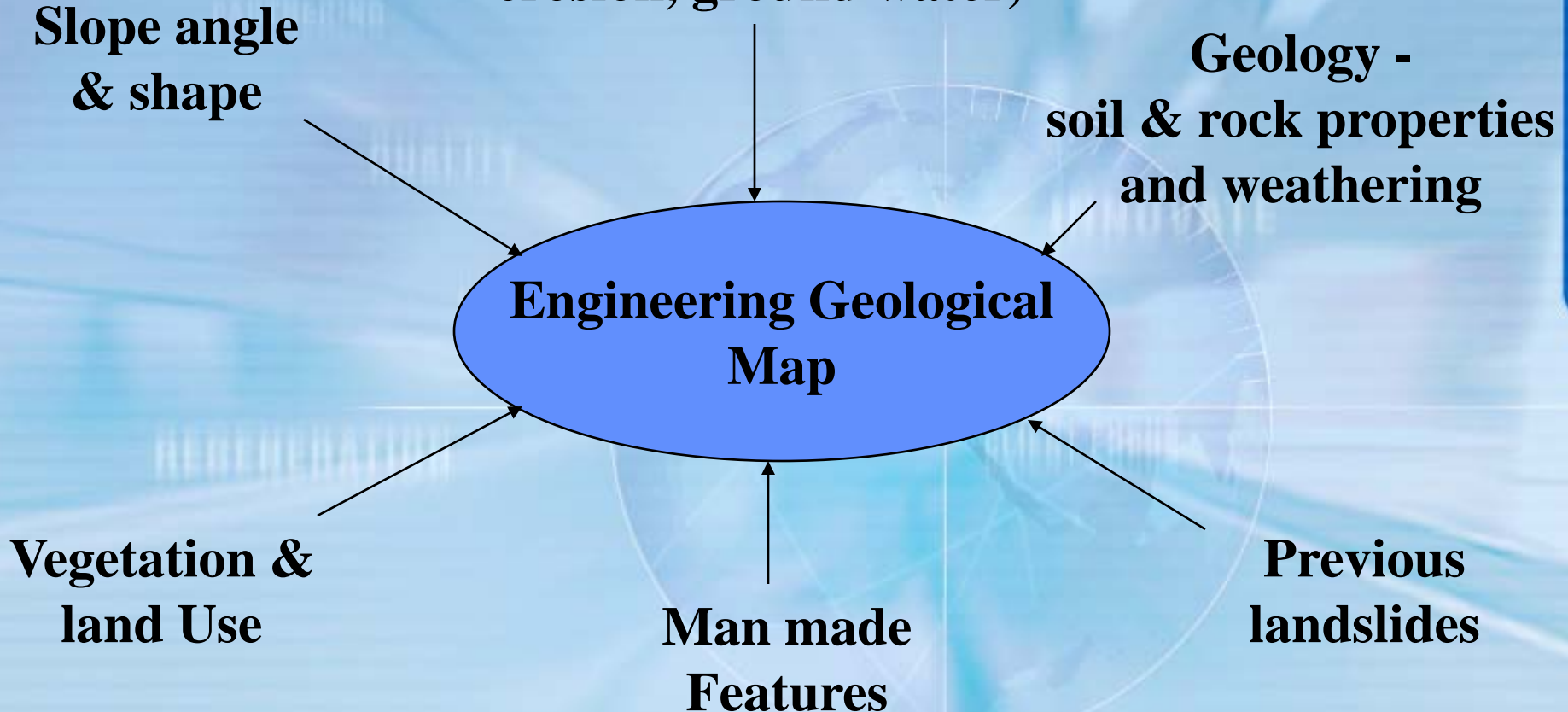
Geology - soil & rock properties and weathering

Engineering Geological Map

Vegetation & land Use

Man made Features

Previous landslides



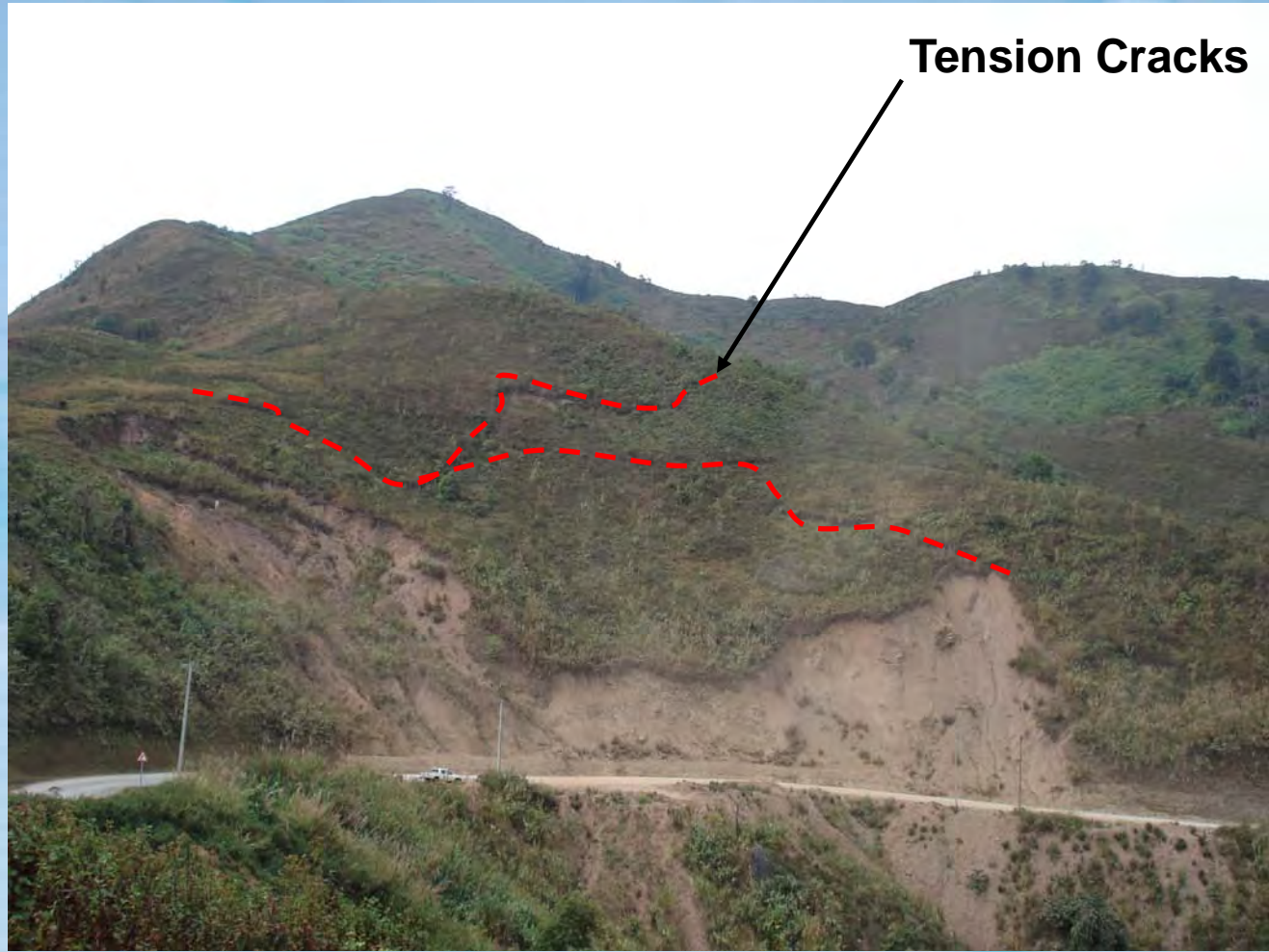
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Road 13N - Km 260.3

Rotational
Failure



shallow
(translational)
failure

SEACAP 21/04 Road 13N - Km 260.3



Tension Cracks

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**Shallow failures
below and above road**

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Road 13N - Km 336.4

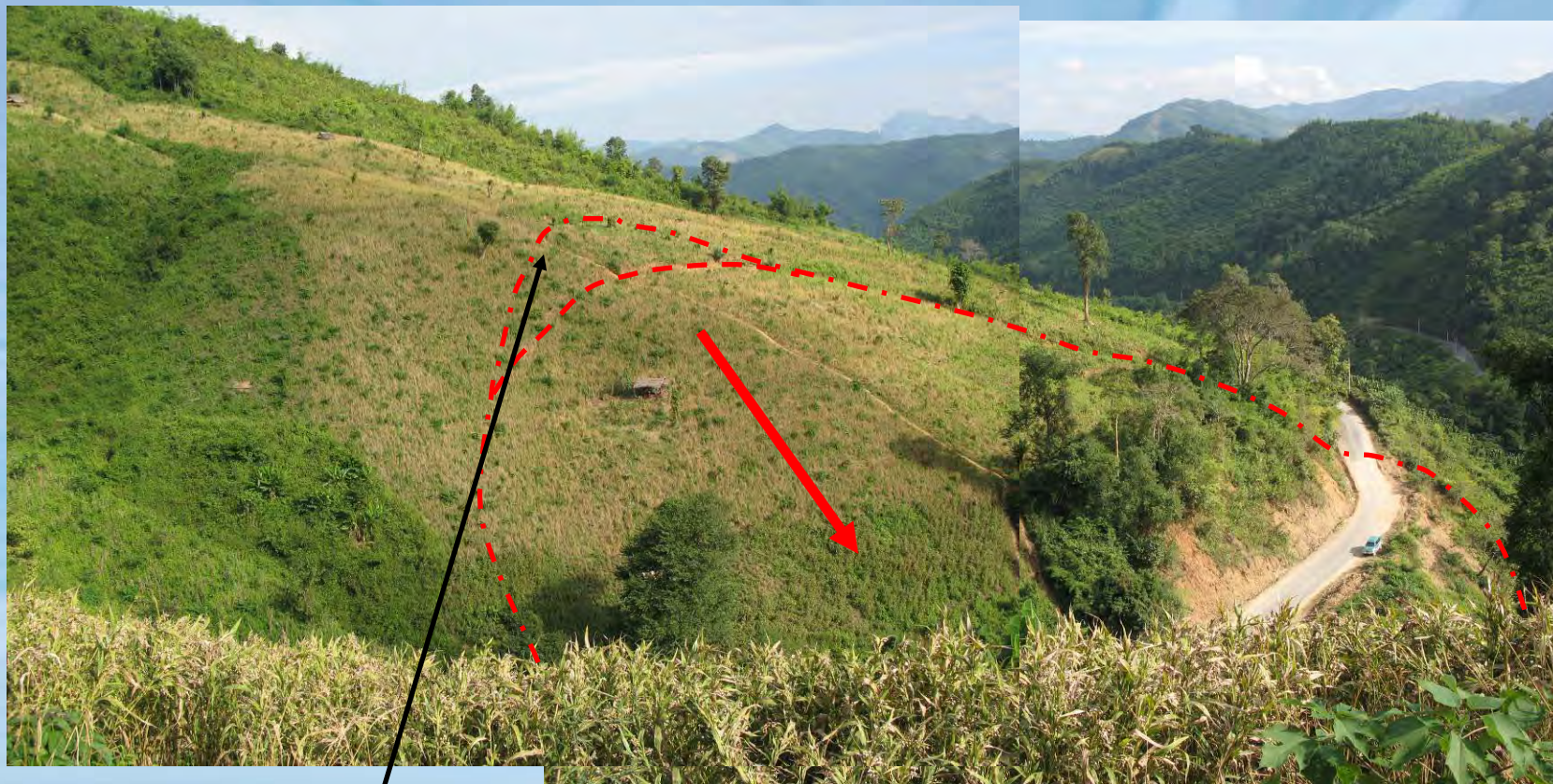


Road side-
drain 'lifted'

Road surface
deformed

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Road 13N - Km 336.4



Back Scarp

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Examples of Engineering Geological Maps

- **Examples from Laos (SEACAP) Sites**
 - **Km 260.3**
 - **Km 242**
 - **Km 317.9**

SEACAP 21/04 Road 13N - Km 242



Concrete
surface
protection



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Road 13N - Km 317.9



Tension
cracks
hidden in
trees

Back Scarp??