1. Core Principle for DMC Recommendations

“Avoid where possible, reduce where unavoidable, and adapt where relocation is not feasible.”

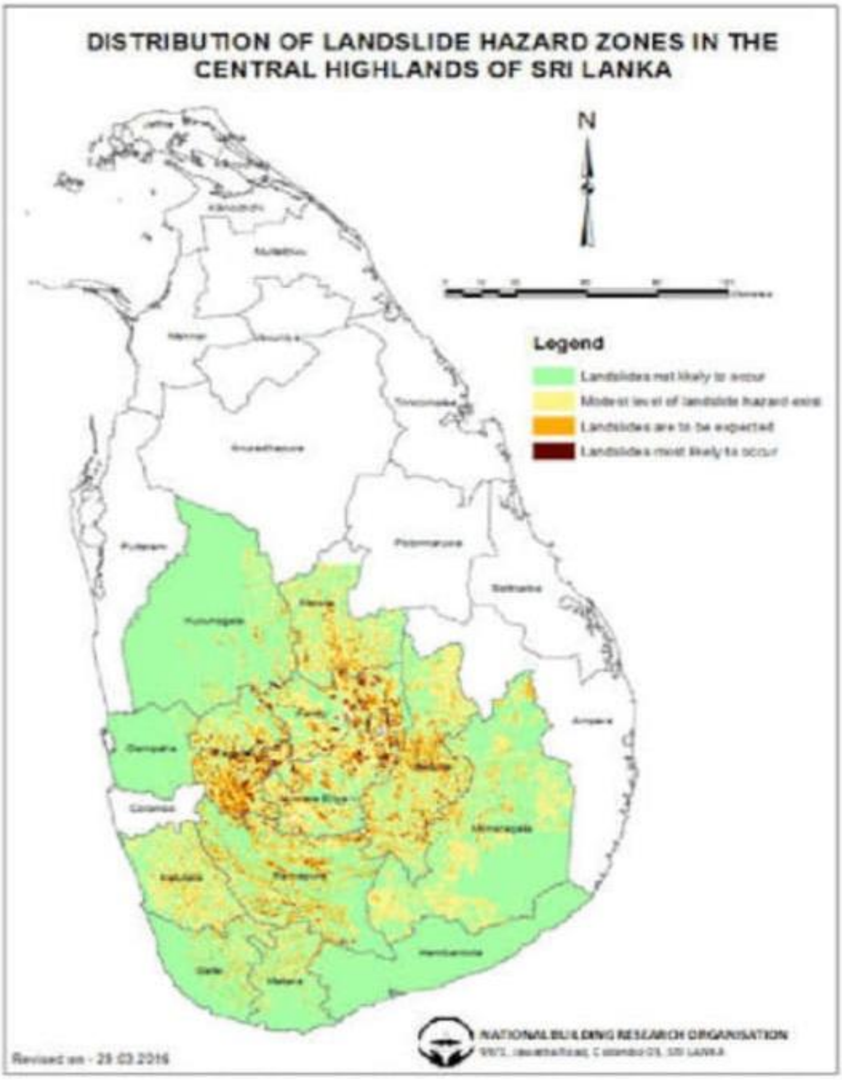
This aligns with:

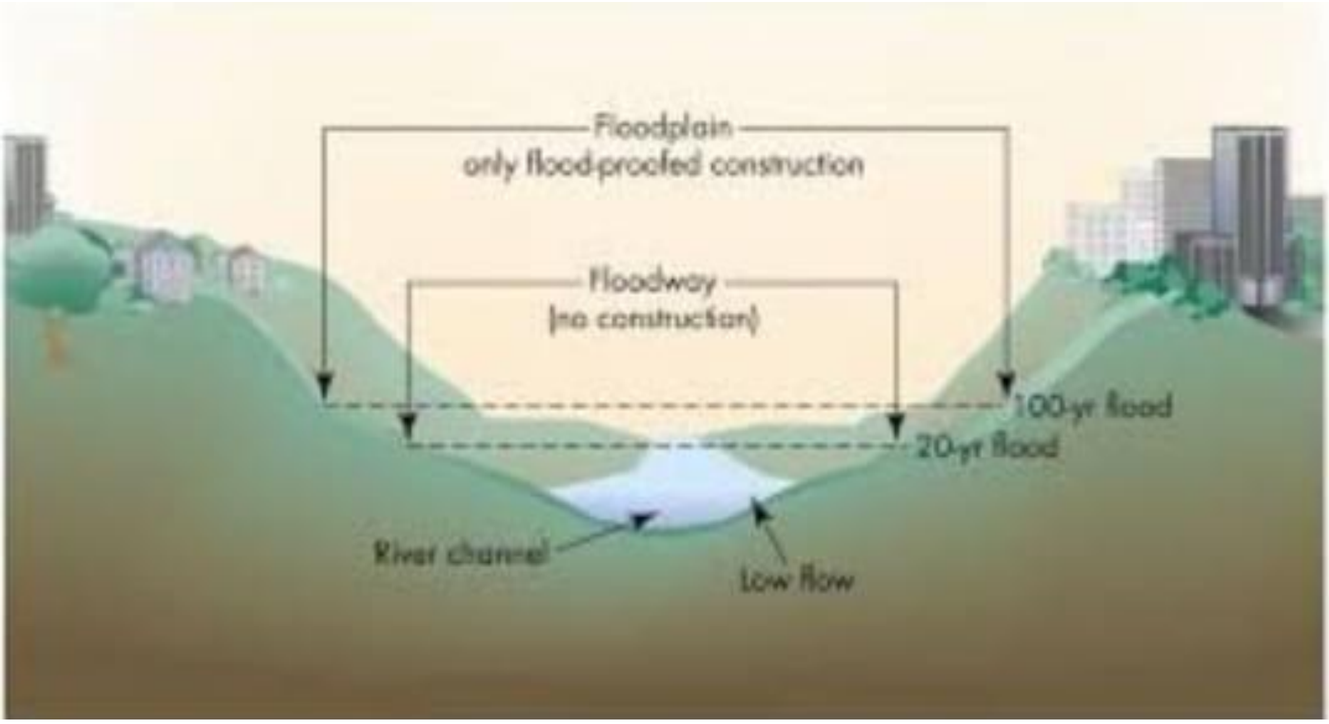
*Sendai Framework

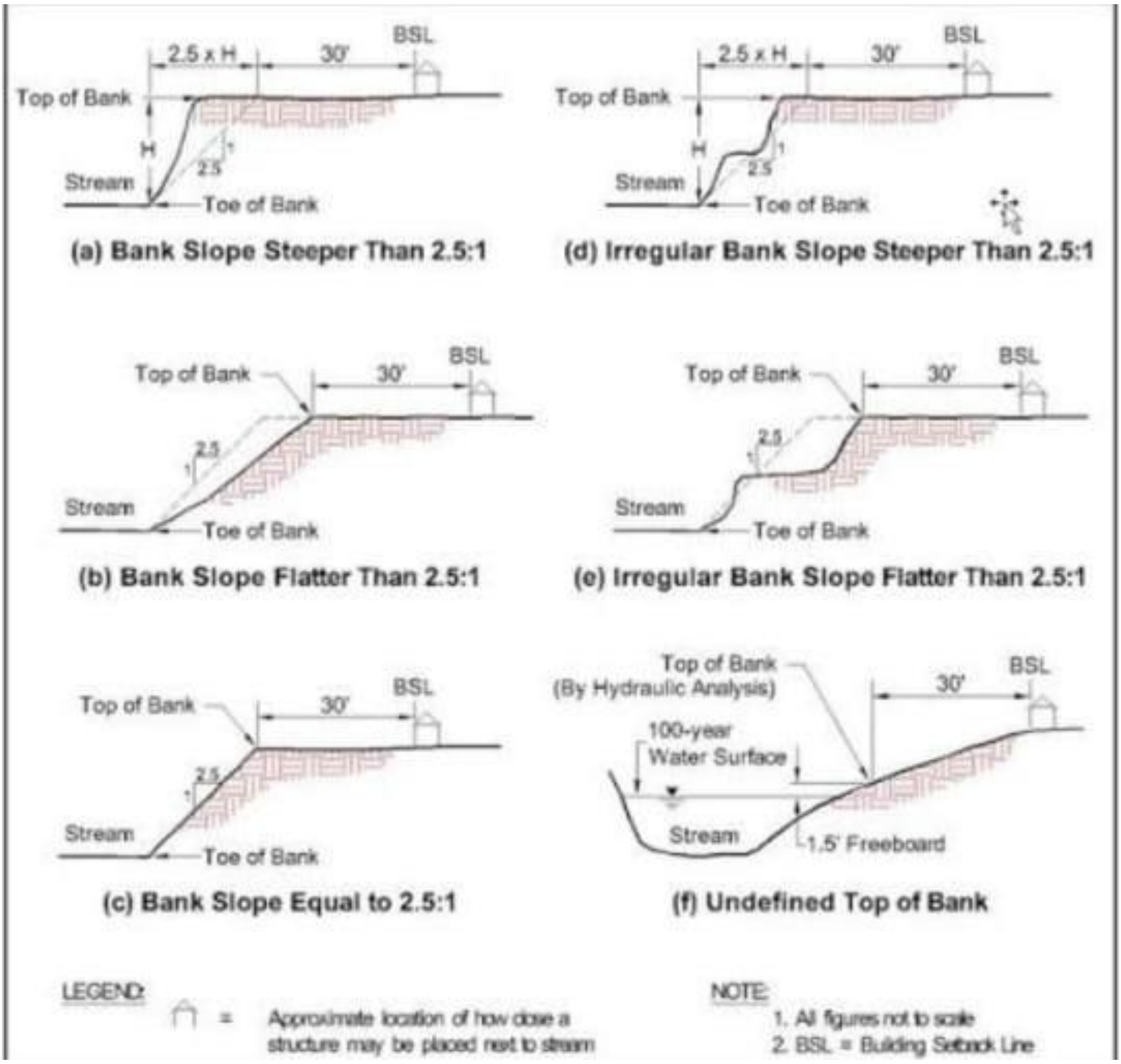
*World Bank / ADB PDNA guidance

*Climate-resilient recovery principles

2. Land-Use Zoning & Settlement Conditions (First Line of DRR)




Floodplain
only flood-proofed construction
Floodway
(no construction)
100-yr flood
20-yr flood
River channel
Low flow


2.5 x H
30'
BSL
Top of Bank
H
Stream
Toe of Bank
2.5
1
(a) Bank Slope Steeper Than 2.5:1
(d) Irregular Bank Slope Steeper Than 2.5:1
(b) Bank Slope Flatter Than 2.5:1
(e) Irregular Bank Slope Flatter Than 2.5:1
(c) Bank Slope Equal to 2.5:1
Top of Bank
(By Hydraulic Analysis)
100-year
Water Surface
1.5' Freeboard
(f) Undefined Top of Bank
LEGEND:
= Approximate location of how close a structure may be placed next to stream
NOTE:
1. All figures not to scale
2. BSL = Building Setback Line

A. No-Build Zones (Mandatory)

DMC should recommend legal enforcement of: High-risk landslide zones (NBRO identified)

River setback zones:

Minimum 10 – 30 m from minor rivers 50–100 m from major rivers (basin-based)

Steep slopes:

> 30° slope → No permanent housing

Recommendation:

> Permanent housing must not be reconstructed in red-zoned areas.

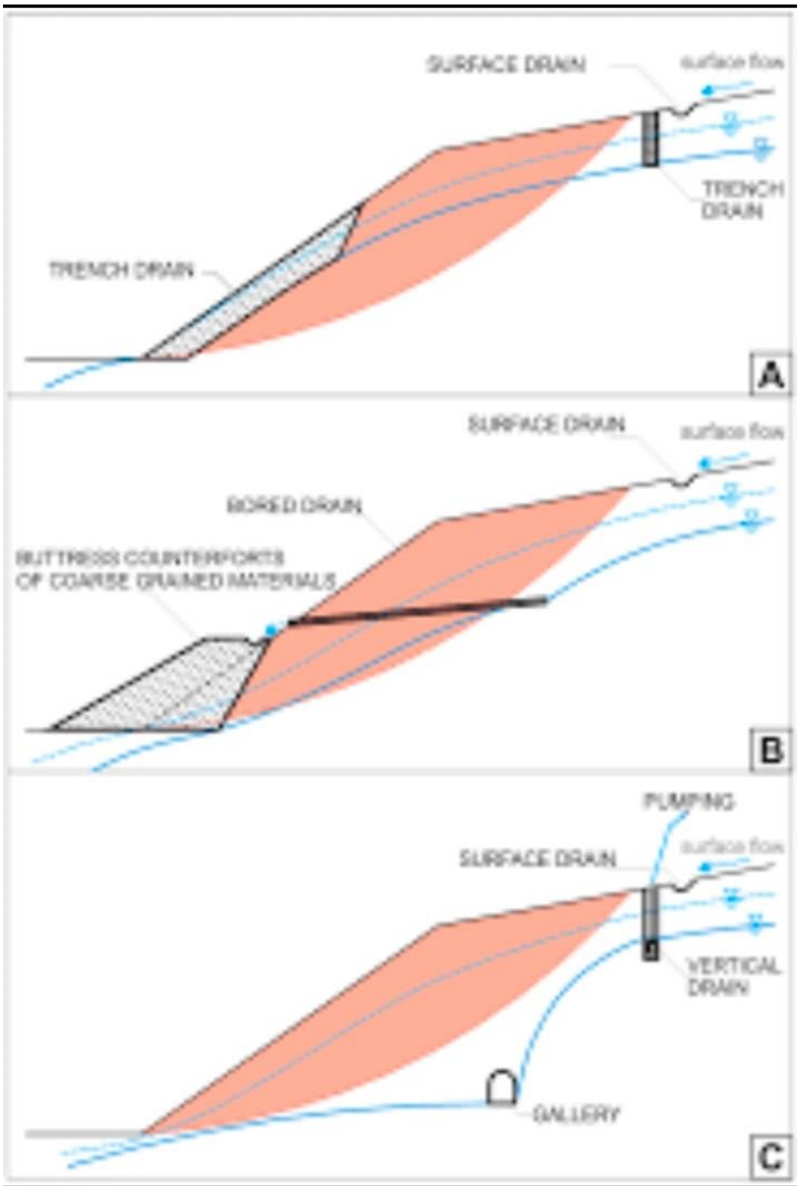
B. Conditional Build Zones

If relocation is not immediately feasible:

Low-rise only (single storey) Mandatory slope and foundation stabilization

Engineering clearance required

3. "Build Back Better" Construction Conditions – Landslide Areas


SURFACE DRAIN
surface flow
TRENCH DRAIN
TRENCH DRAIN
A
SURFACE DRAIN
surface flow
BORED DRAIN
BUTTRESS COUNTERFORTS
OF COARSE GRAINED MATERIALS
B
PUMPING
SURFACE DRAIN
surface flow
VERTICAL DRAIN
GALLERY
C

A. Foundation & Slope Safety

Mandatory conditions:

*Stepped or pile foundations

*Retaining walls (engineer-certified)

*Proper slope cutting (no vertical cuts)

*Surface and sub-surface drainage systems

*No septic tanks upslope of houses

Critical DRR condition:

Drainage failure causes more landslides than rainfall alone.

B. Lightweight Superstructures

Recommend:

*Confined masonry

*Steel frame + light infill

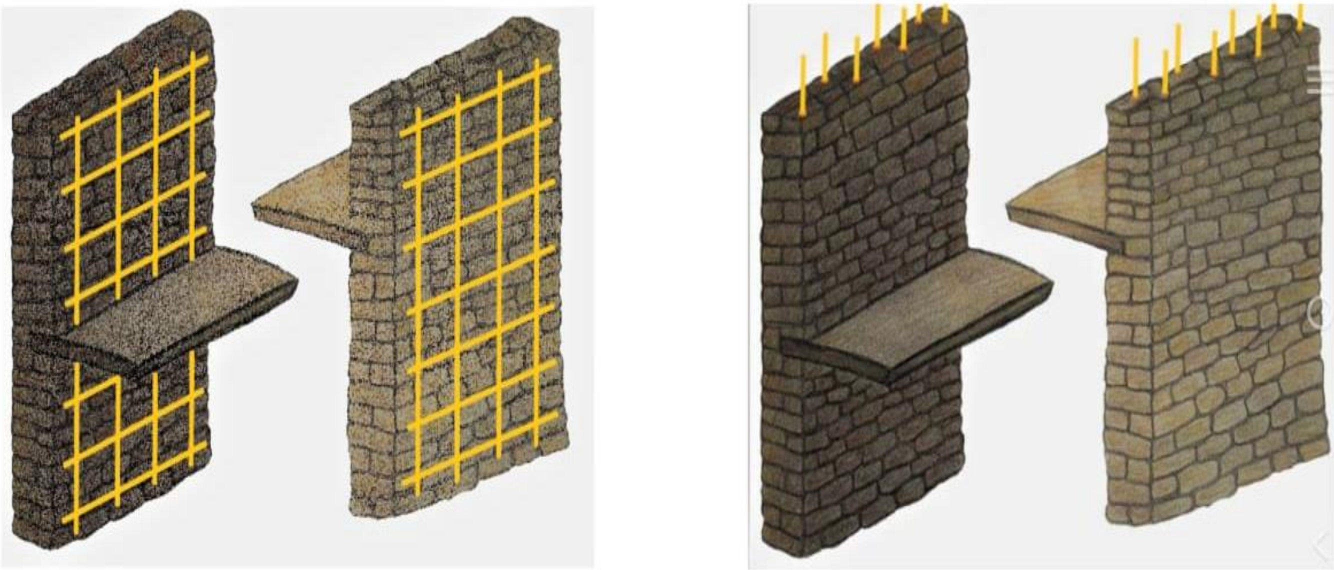
*Timber / engineered bamboo (treated)

Avoid:

*Heavy reinforced concrete roofs on slopes

4. “Brazilian-Style” Resilient Construction – Adapted for Sri Lanka

What is often referred to as “**Brazilian construction**” in DRR contexts means:



(a) (b)

Key Features:

*Confined masonry (brick/block walls confined by RC columns & beams)

*Ring beams at plinth, lintel, and roof level

*Incremental construction (safe to extend later)

Performs well in:

*Landslides

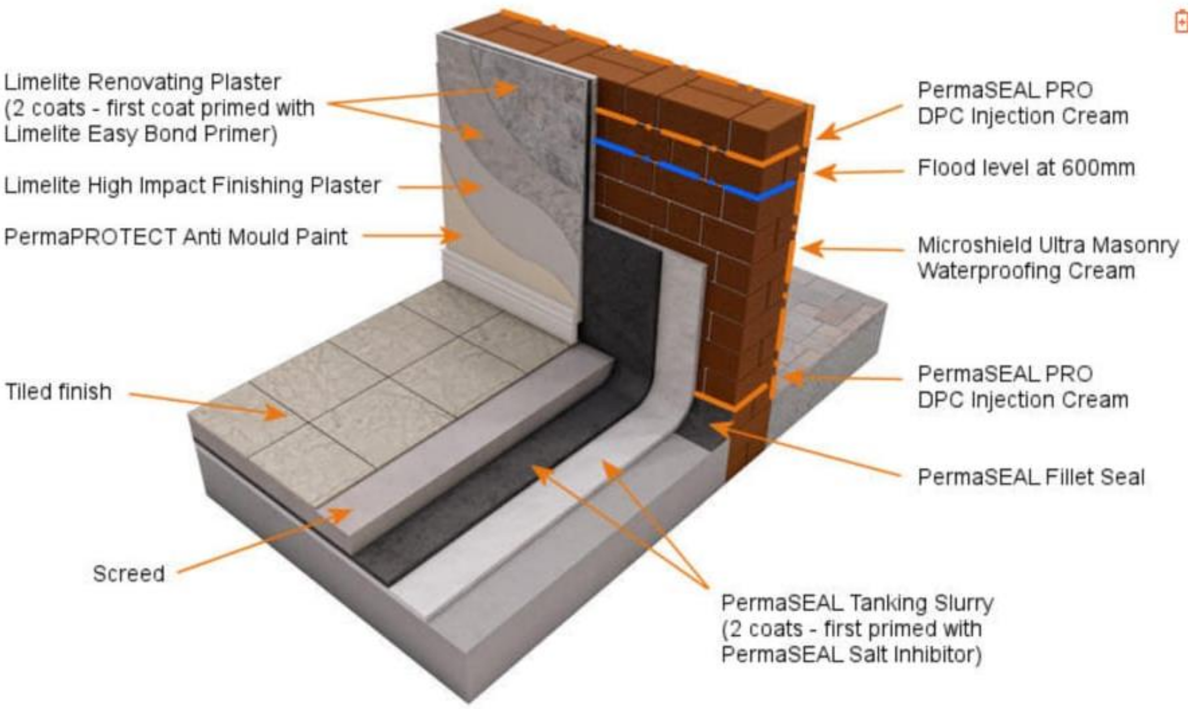
*Floods

*Moderate earthquakes

DMC Recommendation:

Confined masonry with proper drainage is more resilient and affordable than unplanned RC structures.

5. Build Back Better Conditions – River Basin & Floodplain Areas



A. Elevation & Layout

*Raised plinths above 100-year flood level

*Stilt houses in frequently flooded areas

*Open ground floor for water passage

*Minimum obstruction to river flow

B. Flood-Resistant Materials

Recommend:

*Cement-stabilized blocks

*Treated timber

*Waterproof plaster

*Elevated electrical wiring and sockets

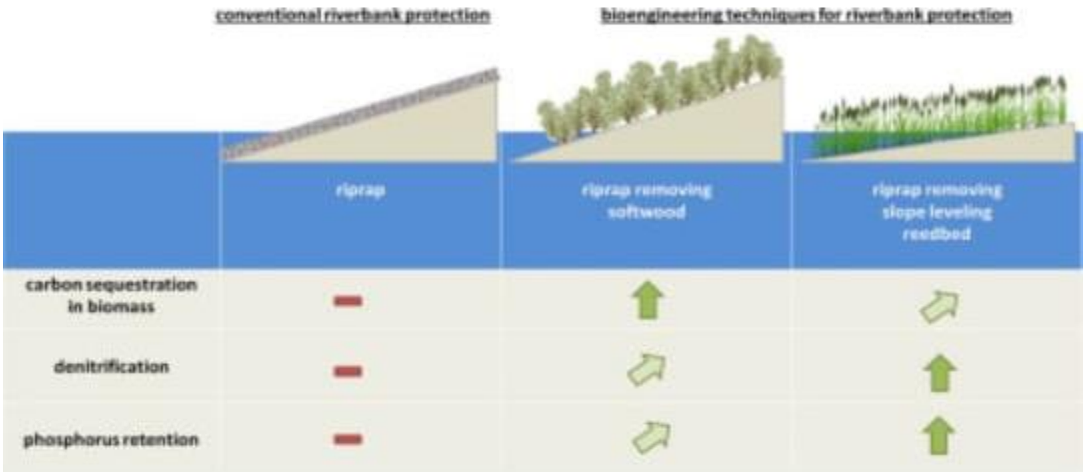
Avoid:

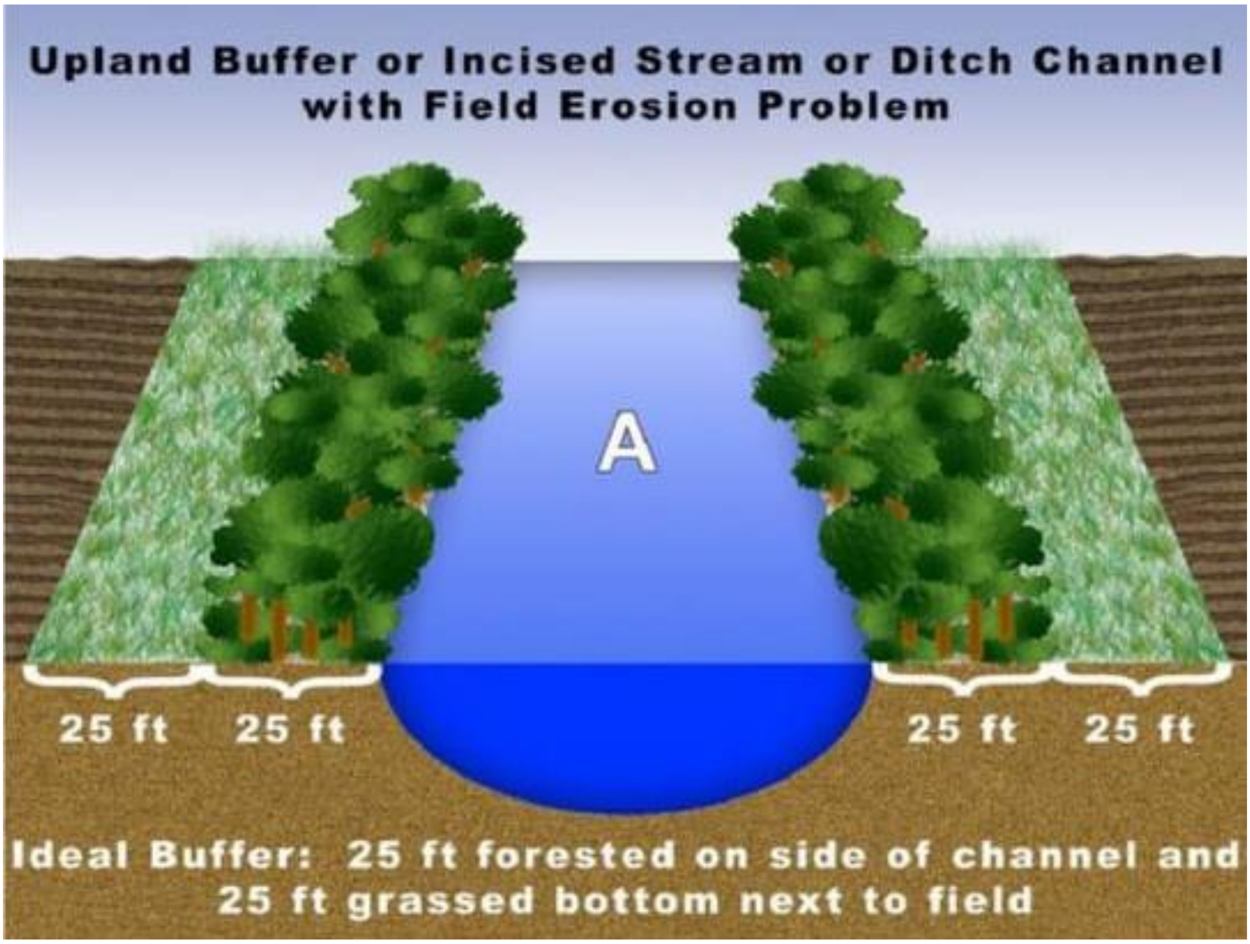
*Mud walls

*Untreated timber

*Ground-level electrical systems

6. Nature-Based Solutions (Strongly Recommended)





A. Landslide Areas

*Vetiver grass

*Deep-rooted native species

*Terracing with vegetation

B. Riverbanks

*Riparian buffer zones (10–30 m)

*Bio-engineered riverbank protection

*Floodplain restoration

Key advantage:

*Low cost + high sustainability + community ownership

7. Community-Level DRR Conditions (Non-Structural)

DMC should recommend:

*Mandatory household drainage maintenance

*Community early warning protocols

*Landslide observation points

*Evacuation route marking

*Local DRR committees at GN level

8. Minimum DRR Conditions DMC Can Officially Recommend

You may consolidate recommendations as:

DMC Minimum DRR & Build Back Better Conditions

1. No reconstruction in red-zoned landslide and floodplain areas
2. Engineer-certified slope, foundation, and drainage design
3. Confined masonry or lightweight structures only
4. Raised plinths or stilt construction near rivers
5. Mandatory surface and sub-surface drainage
6. Nature-based slope and riverbank stabilization
7. Community-based monitoring and early warning linkage

9. Policy-Ready Statement for PDNA / Cabinet

You may state:

" The Disaster Management Centre recommends enforcing risk-based land-use zoning and climate -resilient 'Build Back Better' construction standards, particularly confined masonry, raised plinth or stilt housing, engineered drainage, and nature-based stabilization, in landslide-prone river basins and flood-adjacent areas."

10. Next Step (Optional – I can prepare)

If you wish, Sir, I can:

*Draft official DMC DRR construction guidelines

*Prepare a Cabinet paper annex

*Align recommendations with NBRO, UDA, and Local Authority by-laws

*Create illustrated manuals for district engineers & communities

*Just let me know how you would like to proceed