

# APPORTIONING SPACE AND NEEDS: GREEN LAND MANAGEMENT OPTIONS FOR POSTERITY

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RIPARIAN ZONE AT A CROSSROADS - UNDERSTANDING  
LAND MANAGEMENT FOR RIPARIAN RESERVES



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# AGENDA

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1. FRAMING THE PROBLEM RIPARIAN ZONES ON THE EDGE
2. GLOBAL PERSPECTIVES & CONCEPTUAL FRAMEWORK
3. PLANNING, LAND ADMINISTRATION & SURVEYING: THE  
INSTITUTIONAL VACUUM
4. LAW, PRECEDENT & PERCEPTION
5. FROM CONCRETE TO CONFLICT
6. REFORMS & THE WAY FORWARD

# **SECTION 1: FRAMING THE PROBLEM RIPARIAN ZONES ON THE EDGE**

**PLANNING DISSONANCE: WHEN NATURE MEETS POLICY  
FAILURE**

# UNDERSTANDING RIPARIAN ZONES: A FOUNDATION FOR LAND OWNERSHIP, USE AND MANAGEMENT

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- "Land" under Article 260 of the Constitution includes:
  - The surface and subsurface of the earth, All water bodies (on or beneath the surface), Marine waters within the territorial sea & EEZ, Natural resources contained in or under the surface, The airspace above the land
- **Land ownership** is the legal right to possess, use, and control land, whether privately, publicly, or communally, as recognized under Kenyan law.
- **Land management** is the process of making and implementing decisions about the use, development, and conservation of land resources to ensure sustainability and equitable access.
- **Land administration** is the system and processes through which land rights, use, and responsibilities are recorded, managed, and regulated to support sustainable and equitable land use( Includes planning, survey, policy, valuation etc.).
- **Riparian Zone** is a transition zone between land and water – both ecological and legal boundaries.

# FROM SACRED WATERS TO CONTESTED SPACES WHERE DID THE RAIN START TO BEAT US?

## Pre-Colonial Era

- Rivers = Sacred, protected by cultural norms
- No farming, no felling near water



## Colonial Shift

- Communal → Private land tenure
- Rivers became "idle and free land" for allocation



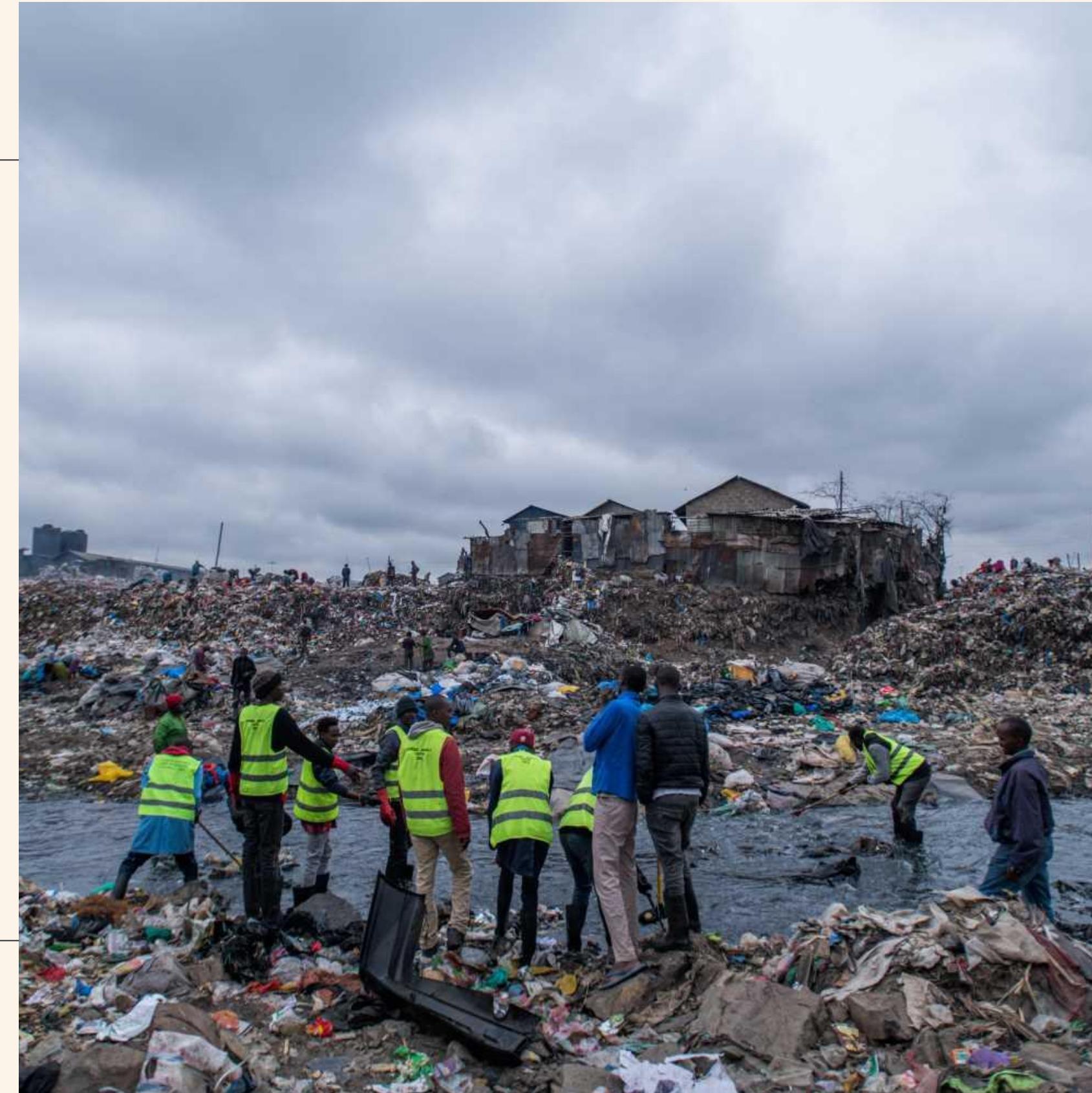
## Post-Independence

- Overlapping institutions, no clear policy
- Riparian zones in titles, not on maps

## Today

- Encroachment by all levels
- No beacons, no consistent law, no central authority

# FROM SACRED GROVES TO FIREWOOD DEPOTS: HOW CULTURE LOST THE RIPARIAN BATTLE



# WHY DO WE PROTECT DEVELOPMENT & ROADS BUT NOT RIPARIAN ZONES?

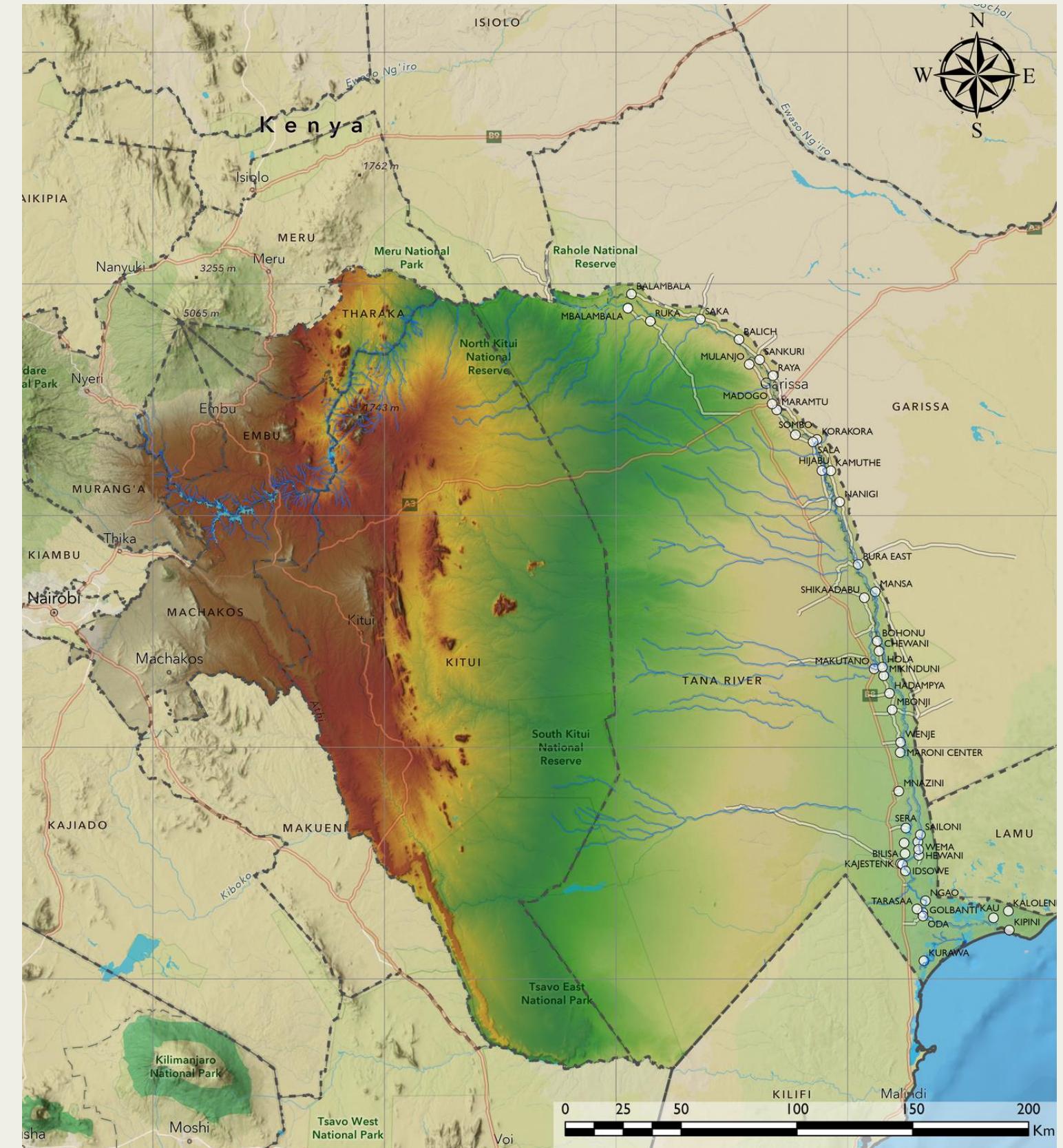
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- Developments & Roads are marked, fenced and protected - riparian zones are not
- 60 m road reserves are enforced - 6 m wide riparian zones are debated
- Roads = development | Riparian Zones = neglected “nature”
- Invisible riparian zones cause visible damage - floods, erosion, dam siltation



# WHEN THE HILL BLEEDS, THE RIVER SUFFOCATES

- Upstream farming near the riparian causes erosion into the river.
  - Soil erosion and agrochemical runoff now pollute rivers like Tana & Athi.
  - Cultivation on riverbanks causes eutrophication and water degradation.
  - Siltation crisis: Rivers are clogging—Tana mirrors China's Yellow River.
  - Hydropower at risk: Masinga Dam has lost 20% capacity due to sedimentation.
  - Broad impacts: Reduced water quality, aquatic loss, and rising human-wildlife conflict.



## SECTION 2: GLOBAL PERSPECTIVES & CONCEPTUAL FRAMEWORK

WHAT THE WORLD TEACHES US – AND WHY WE'RE FALLING BEHIND

# UNDERSTANDING THE RIPARIAN DILEMMA – THEORY VS. REALITY

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## Core Concepts – Scholars

- Defines riparian zones as adaptive ecological systems, not fixed strips
  - Legal Riparian – Based on statutes (e.g., 6m, 30m rules).
  - ❖ Ecological Riparian – Based on vegetation, water tables, flood lines.
  - Functional Riparian – Spaces for filtration, flood control, biodiversity.
- Critique: Kenya treats rivers like static lines on paper, not living systems.

## Key Reports & Studies

- UN-Habitat (2017): Planning ignores rivers as spatial systems.
- NEMA/WARMA (2015–2023): Acknowledge conflicting mandates & poor mapping.
- Survey of Kenya Manuals: No clear guidance on river boundary demarcation.
- World Bank & Chinese Case Studies: Show how tenure chaos and upstream degradation collapse entire river systems.

## Major Gaps

- Riparian zones treated as environmental issues, not land use issues.
- No legal-spatial framework linking tenure, cadastre, planning & ecology.
- Empirical data missing: How many titles encroach? Which laws contradict?

# RIPARIAN LAND GOVERNANCE: GLOBAL LESSONS FOR KENYA

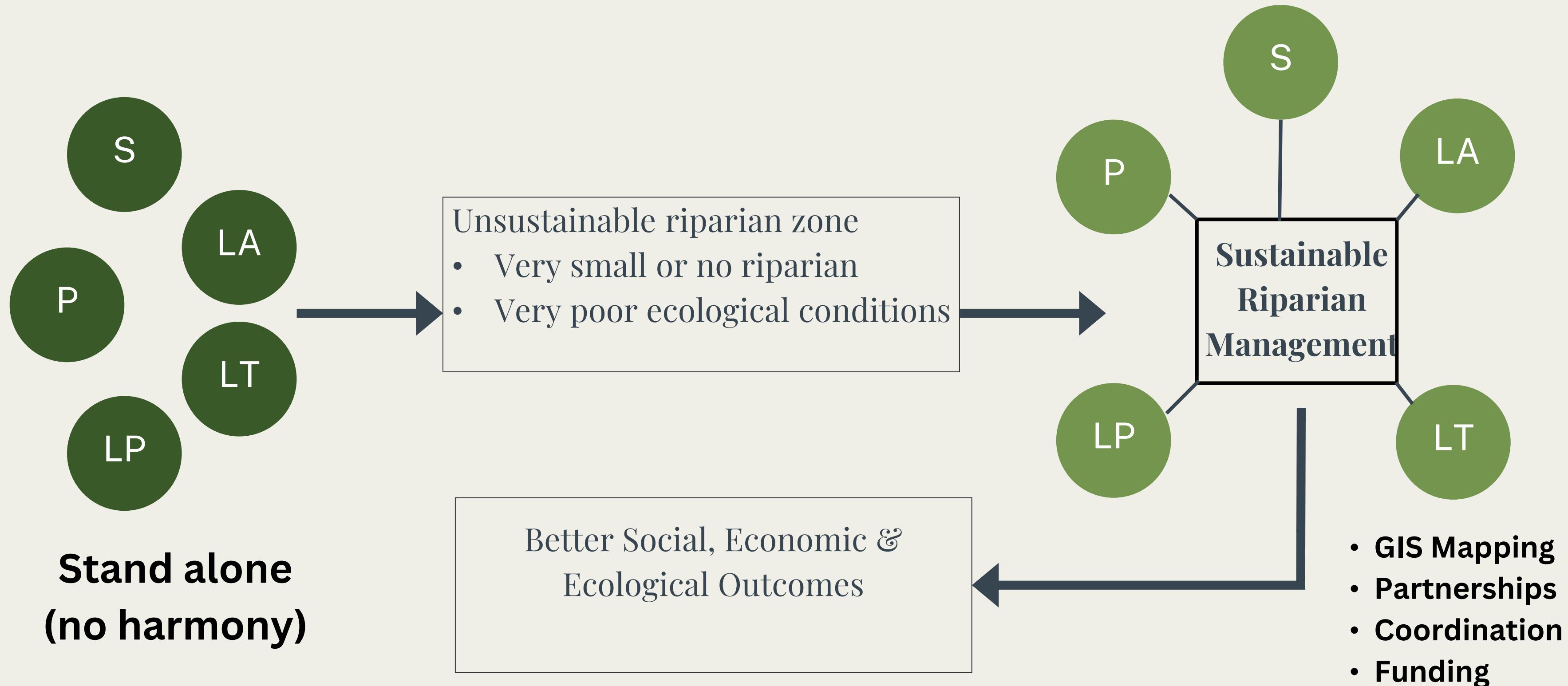
- USA: Clear systems—Riparian Doctrine (East), Prior Appropriation (West); water rights tied to land use; EPA coordinates across agencies.
- Kenya: Legal overlap (Water Act, EMCA, Survey Act); poor enforcement; titles extend into riverbanks due to outdated surveys.

## Global Best Practices

- Singapore: Pre-zoned riparian buffers; canals turned into green spaces.
- Rwanda: Riparian land is public, GIS-mapped, and excluded from private titles.
- Lesson for Kenya: Move from reactive demolitions to proactive planning and registration.



# CONCEPTUAL FRAMEWORK – INTEGRATED RIPARIAN MANAGEMENT



# **SECTION 3: PLANNING, LAND ADMINISTRATION & SURVEYING: THE INSTITUTIONAL VACUUM**

**LAND ADMINISTRATION, SURVEYING & THE LAW  
DRAWING BOUNDARIES AROUND WATER**

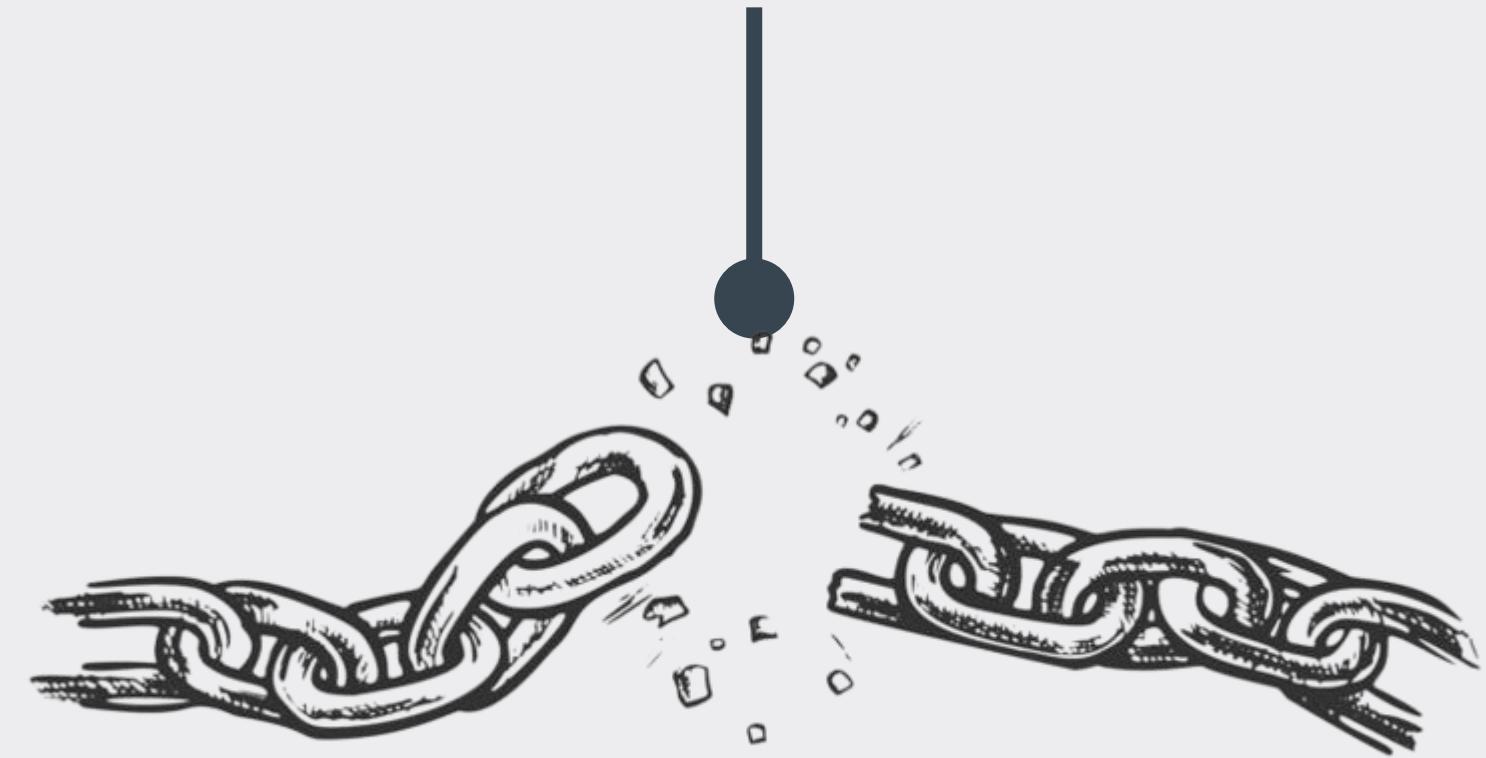
# WHY THE SYSTEM FAILS TO PROTECT RIPARIAN ZONES?

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## Land Admin vs. Reality

- Fragmented institutions: NEMA, WARMA, Counties – all with different riparian widths
- No beacons = riparian land ends up in title deeds
- Cadastral maps stop at centerline of rivers – no reserve shown
- Policy exists (EMCA, NLP) – but weak enforcement

## Riparian missing in all steps



Land Law ..... → Enforcement

Survey

Title

Mapping

“We've mapped roads in detail, but let riparian disappear in silence ,”

# SURVEYING THE INVISIBLE - WHY KENYA'S SURVEY LAWS FALL SHORT ON RIPARIAN PROTECTION?

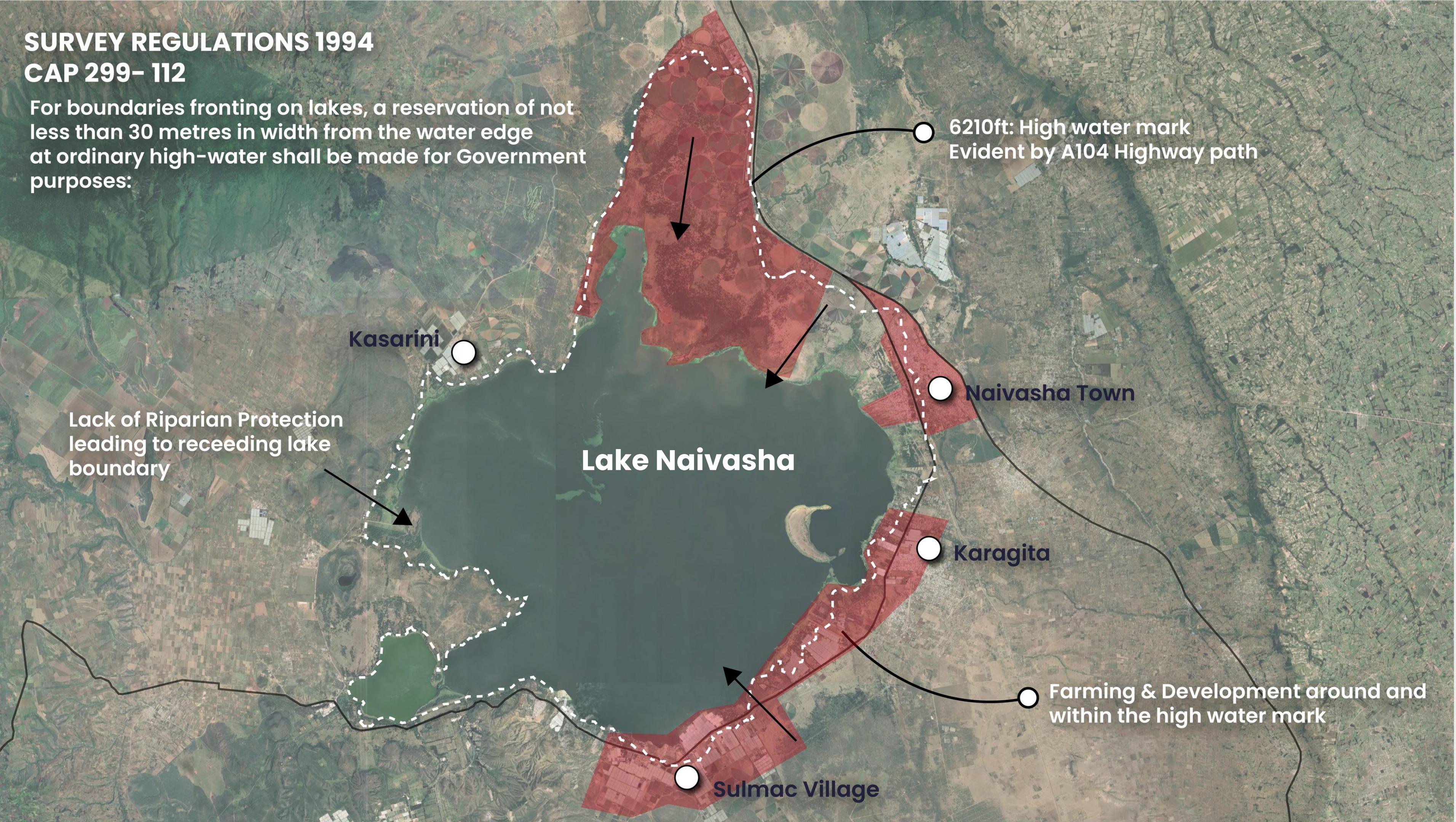
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- Law Doesn't Recognize Rivers as Boundaries - Survey Act (CAP 299) allows rivers to be marked as parcel edges using straight-line segments.
- But Riparian Zones Aren't Beaconed - No physical markers placed; riparian remain "conceptual" on paper—not protected on the ground.
- Rivers Shift, Maps Don't - When rivers meander or erode banks, parcel boundaries stay outdated—no updates or detection.
- Result: Legal Confusion
  1. Titles overlap rivers.
  2. Survey plans look valid in court.
  3. Agencies like NEMA/WRA can't enforce what's not mapped.

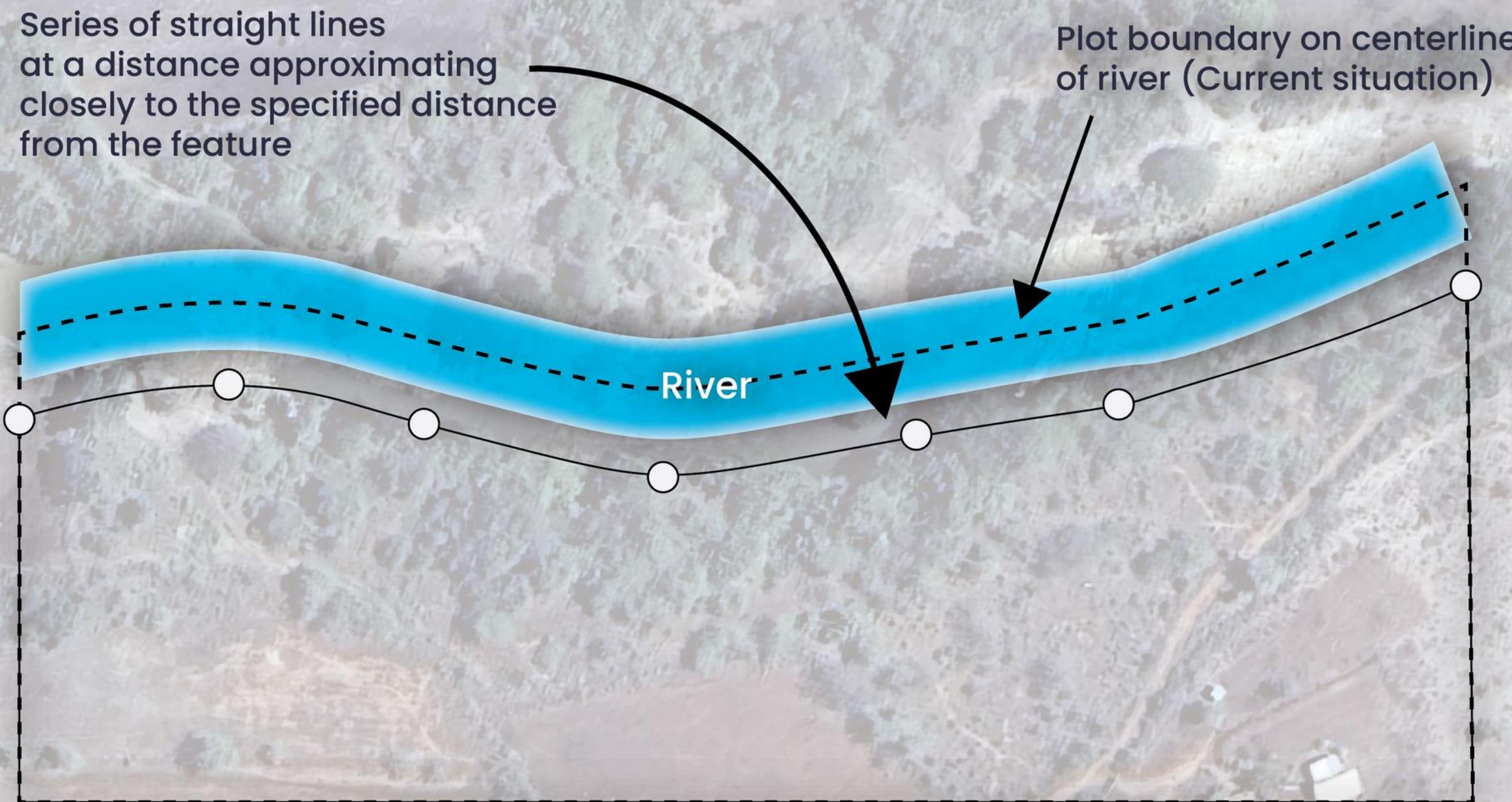
# SURVEY REGULATIONS 1994

## CAP 299- 112

For boundaries fronting on lakes, a reservation of not less than 30 metres in width from the water edge at ordinary high-water shall be made for Government purposes:



## SURVEY REGULATIONS 1994 CAP 299– 113



Detailed Topographical Survey should precede Planning to map out the river to enable determination of straight lines and series of straight lines

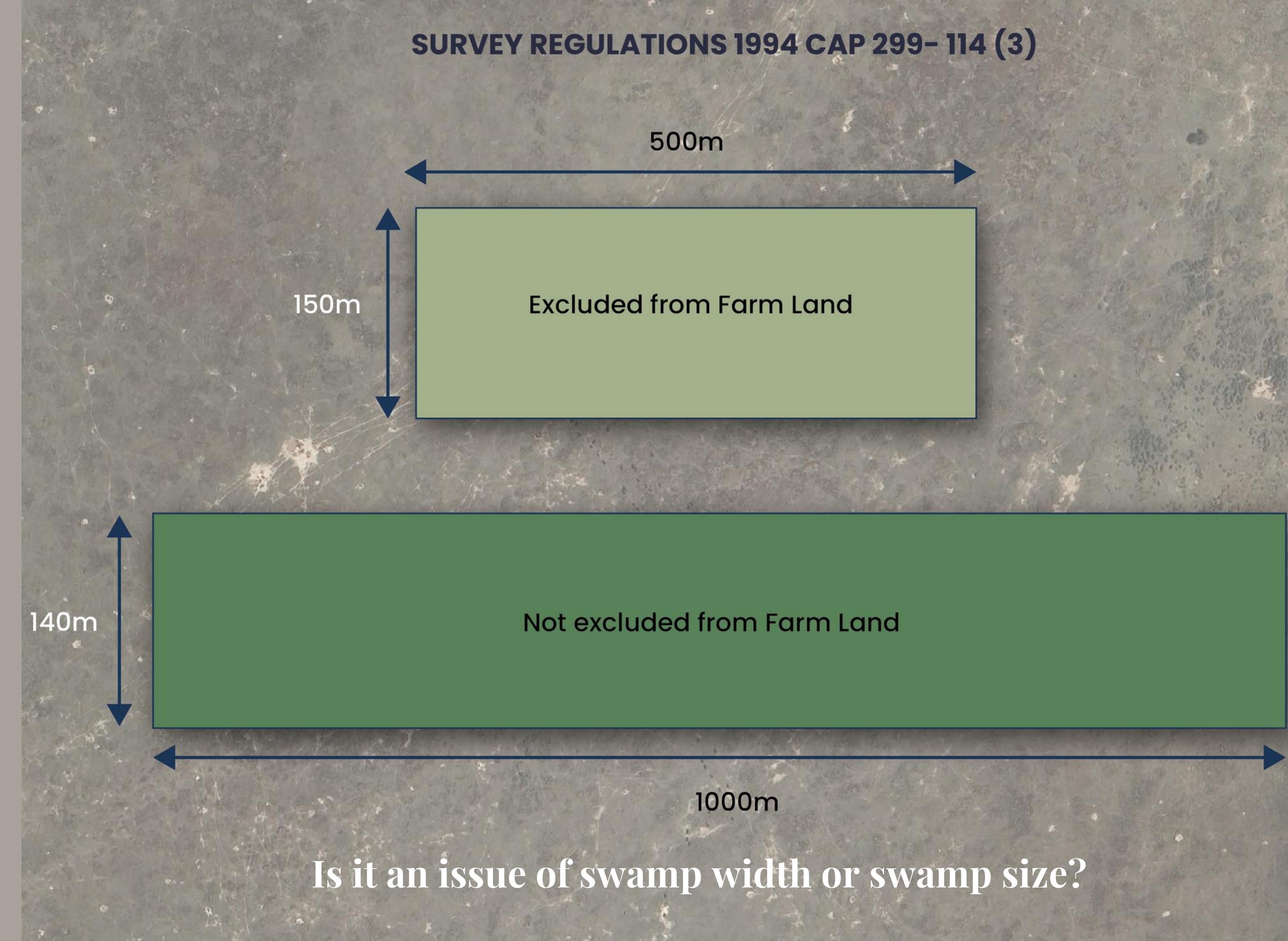
**113** When surveying the reservations referred to in regulations 110, and 112, of these Regulations, a surveyor may make each boundary a straight line or a series of straight lines at a distance approximating closely to the specified distance from the feature for which a reservation is needed

113 (2) Indefinite median lines, which cannot be re-established by survey, shall be avoided.

(3) Swamps of an average width of 150 metres or more shall be excluded from farms, and a straight line boundary along the edge of the swamp shall be surveyed and beaconed.

Does the Median line protect the swamp?

### SURVEY REGULATIONS 1994 CAP 299- 114 (3)



# TOO MANY COOKS AT THE RIVERBANK: THE CRISIS OF COORDINATION

- No unified definition of riparian zones—6m, 30m, flood lines—creates loopholes.
- Multiple agencies (NEMA, WRA, Survey of Kenya, counties, Lands ministry) have overlapping roles, but no clear authority.
- Contradictory decisions fuel land disputes and undermine enforcement.
- Poor data sharing and outdated maps worsen confusion.
- Legally titled land can still be ecologically illegal, leading to demolitions and court battles.

Statutory Provisions on Kenya Riparian Width	
Statute	Recommended Riparian width in (m)
Water Act 2002	Minimum 6m and max 30m from the river bank
EMCA	Minimum 6m and max 30m from the river bank
PLUPA 2019	Requires all physical and land use plans to safeguard riparian zones as ecologically sensitive areas, but it does not fix a buffer distance
Survey Act	Minimum 30m for tidal rivers only. No mention of other small rivers, Measurement from high water mark
County regulations	Minimum 6m and max 30m from high water mark

# THE INVISIBLE RIVERBANKS: WHY MAPPING HAS FAILED RIPARIAN PROTECTION

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- No national riparian registry—no official maps, coordinates, or buffers.
- Curved rivers are hard to survey, beacon, or digitize—most maps use straight lines.
- Outdated data—no real-time satellite, drone, or GIS layers at agency or county level.
- Survey protocols unclear—default widths used without field checks.
- Result: Illegal developments look legal, enforcement fails, and court cases collapse



No national riparian registry  
No coordinates  
No drone/satellite data  
Unclear survey standards

# PROPOSING A NATIONAL RIPARIAN AUTHORITY (NRA)

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- Kenya lacks a single agency with full mandate to map, protect, and enforce riparian zones.
- Proposal: Create a National Riparian Authority (NRA) under the Office of the President or National Land Commission.
- Mandate:
- Map all riparian zones and floodplains (starting with the 5 major river basins).
- Enforce consistent buffer widths based on land use, slope, and riparian size.
- Integrate data into Ardhisasa, NLIMS, County GIS systems.
- Lead inter-agency coordination (NEMA, WRA, Survey of Kenya, counties).
- Educate communities & manage conflict resolution (e.g. Farmers vs Garissa pastoralists).
- Model after TARDA, but with national scope and legal teeth.

If roads have KeNHA, rivers need their champion too

# MAPPING KENYA'S RIPARIAN ZONES BY HIERARCHY

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Kenya lacks a national, hierarchical inventory of rivers and water bodies.

Proposal: Classify and map rivers by scale, function, and ecological sensitivity:

- **Level 1:** Major Rivers, Lakes & Oceans (e.g., Tana, Athi, Nzoia, Ewaso Ng'iro)
- **Level 2:** Tributaries & Perennial Streams (e.g., Mathare, Nairobi River)
- **Level 3:** Seasonal rivers & wetlands (e.g., Lorian Swamp, seasonal laggas)
- **Level 4:** Springs, seeps, stormwater channels (esp. in urban areas)

Use this hierarchy to define:

- Buffer width per category
- Enforcement priority
- Data collection and community co-mapping

Output: A central GIS layer linking Survey of Kenya, WRA, NEMA, counties & Ardhisasa.

**Not all rivers are equal—but all must be known**

# **SECTION 4: LAW, PRECEDENT & PERCEPTION**

**LAW, POWER AND PERCEPTION – WHO REALLY OWNS THE  
RIPARIAN?**

# MAPPING KENYA'S RIPARIAN ZONES BY HIERARCHY

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## Curvilinear Boundaries Recognized

The Survey Act (Cap 299) acknowledges rivers as natural boundaries – classified as curvilinear.

Surveyors are expected to follow their natural meanders when defining property edges.

## But No Mandatory Beaconing for Riparian Zones

While general parcel boundaries must be beaconed, riparian reserves (the buffer areas beyond the river edge) are not required by law to be physically marked or geo-referenced.

## Rivers Often Unmapped in Detail

Most Registry Index Maps (RIMs) or Deed Plans stop at the river – the riparian strip is left undefined, making enforcement near-impossible.

## No Standard for River Width or Setback in Survey Plans

The Act does not specify setback widths (like 6m or 30m); these are left to environmental agencies (NEMA, WRA), leading to conflicting legal interpretations.

**“ Riparian zones are protected only on paper, while encroachments are surveyed and titled. ”**

# **“RIPARIAN IS PUBLIC LAND” LEGAL PRECEDENT FROM FARADAY LTD V. MUNICIPAL COUNCIL OF MOMBASA (2005)**

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## **Case Overview**

- Faraday Ltd v. Municipal Council of Mombasa & Others – High Court of Kenya, 2005.
- Faraday had constructed on coastal land adjacent to the Indian Ocean.
- Dispute: Whether the land was private (based on title) or public riparian reserve.

## **Court’s Ruling Highlights**

- Riparian land = public land under the public trust doctrine.
- Title deeds cannot override ecological function or public interest.
- The court declared that no private interest can extinguish the public trust in riparian zones.

## **Legal Significance**

- Land ownership is not absolute where riparian areas are concerned.
- Reinforces NEMA and County authorities' power to:
  - Enforce buffer zones.
  - Reject or revoke development approvals on riparian land.
- Precedent-setting judgment: Titles over riparian areas are subordinate to environmental law.

# **"RIPARIAN IS PUBLIC LAND" LEGAL PRECEDENT FROM FARADAY LTD V. MUNICIPAL COUNCIL OF MOMBASA (2005)**

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## **Land Use & Planning Implications**

- Surveyors and planners must account for invisible ecological restrictions.
- Environmental function > cadastral record.
- Supports cancellation or rectification of titles that include riparian land—even if obtained innocently.

## **Critique of the Judgment**

- No clarity on operationalization:
  - How should riparian zones be delineated or mapped?
  - What role should surveyors and planners play?
- The ruling upheld principle, but did not resolve procedural or institutional gaps.

**“ Riparian reserves are public land by operation of law, regardless of title claims ”**

# CITIZEN PERCEPTION & RIPARIAN ENCROACHMENT: MOVE THE RIVER DOCTRINE

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## When Poverty Meets Power: A Tale of Two Encroachments

Riparian land encroachment is often viewed as a crime of the poor – informal settlers forced into flood-prone riverbanks due to lack of planning, affordable housing, and secure tenure. But the greater threat may lie in the actions of the powerful.

## The ‘Move the River’ Doctrine: "Don't Move the People. Move the River."

This remark wasn’t just rhetorical. It reflected a deeper issue:

- Elite entitlement to land, even public ecological reserves.
- Weaponization of development to legitimize environmental degradation.
- Undermining of environmental justice, where the rich are protected while the poor face bulldozers.

## The Double Standard

- Slum demolitions proceed swiftly under “riparian protection” claims.
- Luxury apartments and malls often remain untouched or are retroactively legalized.
- This fuels public distrust in environmental governance and weakens citizen support for conservation.

## **SECTION 5: FROM CONCRETE TO CONFLICT**

**RIPARIAN STRUGGLES IN URBAN AND RURAL KENYA  
(NAIROBI & TANA RIVER COUNTIES)**

# ONE SIZE DOESN'T FIT FOR ALL: THE 30M RIPARIAN RULE IS ECOLOGICALLY FLAWED

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A uniform 30-meter riparian reserve is applied across Kenya—for all rivers, regardless of their size or stage.

## Why It Fails Ecologically

### At the Source (Youth Stage)

- Streams are narrow (<2m), but crucial for ecosystem health.
- A fixed 30m buffer is excessive for land use yet often ignored due to invisibility.

### At the Mouth (Old Stage)

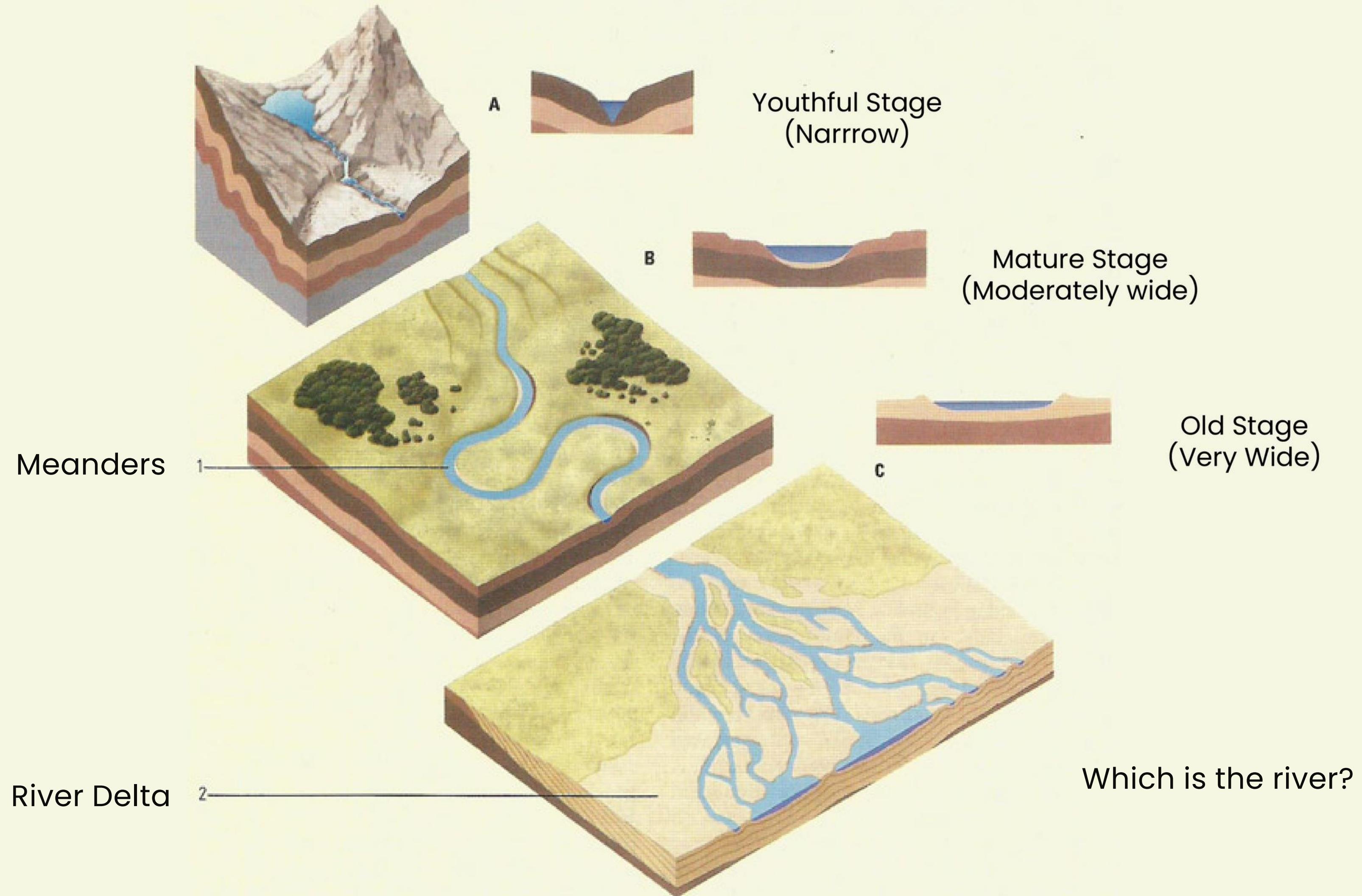
- Rivers like Tana can be 200m wide—a 30m buffer is too narrow to protect floodplains, wetlands, or communities.
- Leaves settlements and ecosystems vulnerable to flooding and encroachment.

## Riparian Width Should Vary With

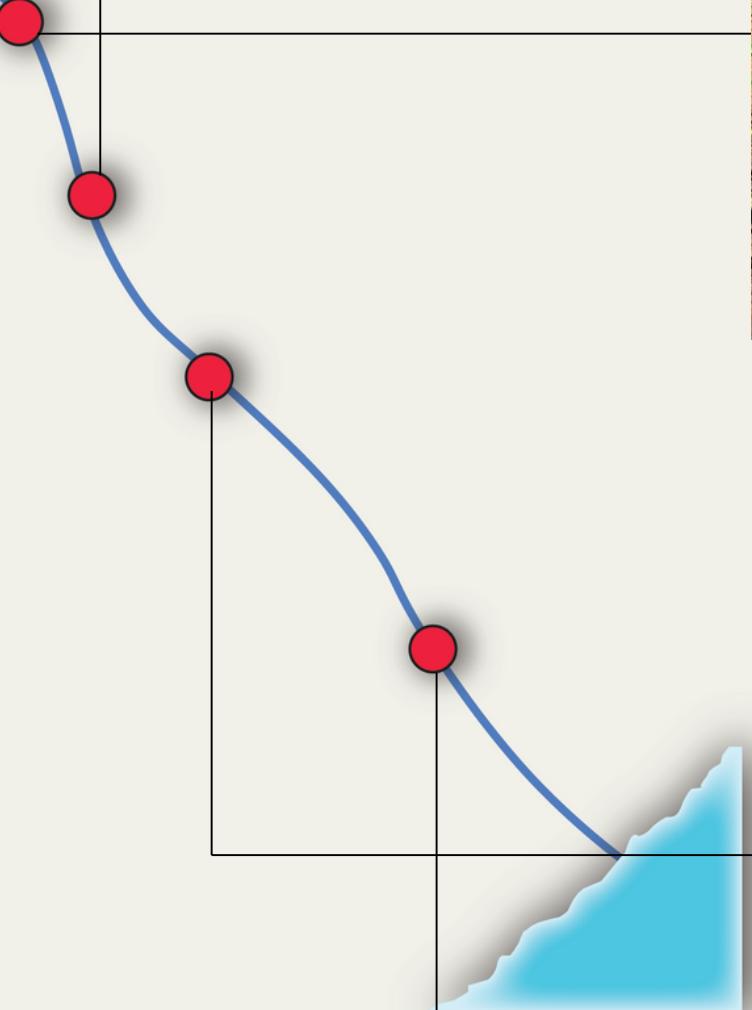
- River morphology (width, depth, velocity)
- Land use context (urban vs rural, forest vs farm)
- Ecological sensitivity (wetlands, biodiversity zones)

## Tana River Example

- In Tana Delta, river width >200m.
- A 30m buffer is only 15% of the river span— inadequate for flood mitigation or conservation.



## Pristine waters- Mt Kenya



River Mathioya



Masinga Dam



River Tana

# RIPARIAN CONFLICT IN THE CAPITAL: A TALE OF TWO CITIES

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## Urban Riparian Inequality

- Informal settlements (e.g., Mathare, Kibera) are built near rivers due to land scarcity and face harsh evictions.
- Luxury estates (e.g., Karen, Runda) encroach riparian zones with little consequence.
- Enforcement is selective, leading to environmental and social injustice.

## Institutional Disarray

- NEMA inconsistently enforces the 30m buffer.
- Shift from reactive enforcement to proactive, preventative planning.
- Survey Department uses outdated, unclear maps.
- WRA promotes river health but lacks enforcement power.

## Mapping and Survey Gaps

- Riparian zones are poorly mapped; many titles overlap them.
- No consistent beaconing or delineation.
- Developers exploit legal ambiguities and loopholes in the Survey Act.

## Policy Takeaways

- Establish a centralized riparian mapping authority.
- Harmonize agency mandates and definitions.

# DYNAMIC RIPARIAN ZONES: CONTEXTUALIZING BOUNDARIES

**Rivers Are Dynamic:** River widths and courses change over time due to natural processes; thus, riparian zones should be adaptable rather than fixed.

**Land Use Compatibility:** The designation of riparian zones should consider the surrounding land use. For instance, the Nairobi Arboretum, being a protected green space, may not require additional riparian buffers.

## Case Study – Mathare 3B:

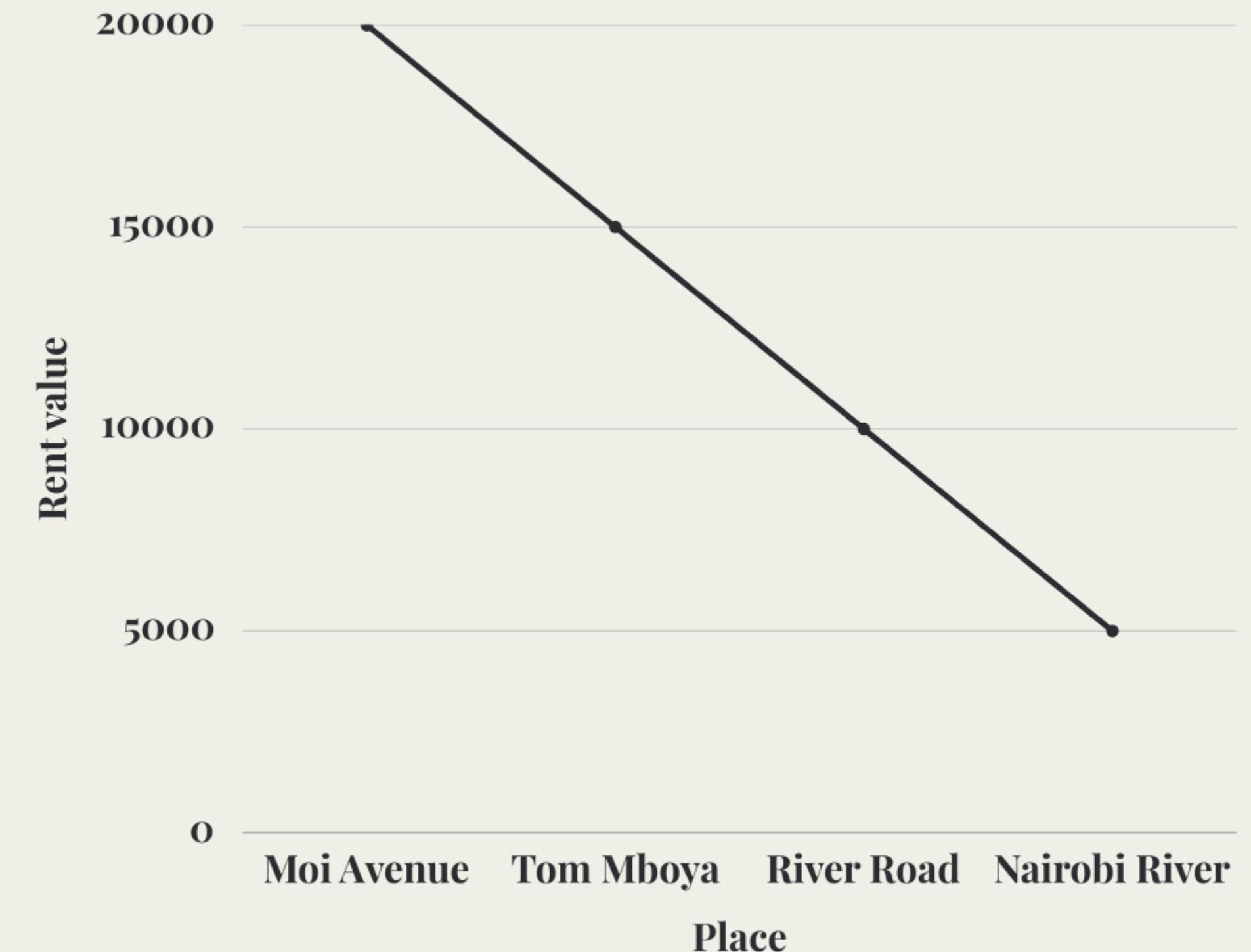
- Area: 19.77 acres
- Population: 18,389 residents
- Population Density: Approximately 930 people per acre
- Implication: With strategic vertical development, the same population could be accommodated on just 5 acres, freeing up space for riparian restoration and other amenities.



# THE RIVER AT THE BACK: PLANNING, VALUE & THE RENT GRADIENT PARADOX

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- Urban land values drop as you move from Moi Avenue → Tom Mboya → River Road.
- Rivers placed “at the back” in planning—unlike roads, which face development.
- Result: Riparian zones become neglected, encroached, undervalued.
- Why don’t we “front-face” rivers like roads in zoning plans?

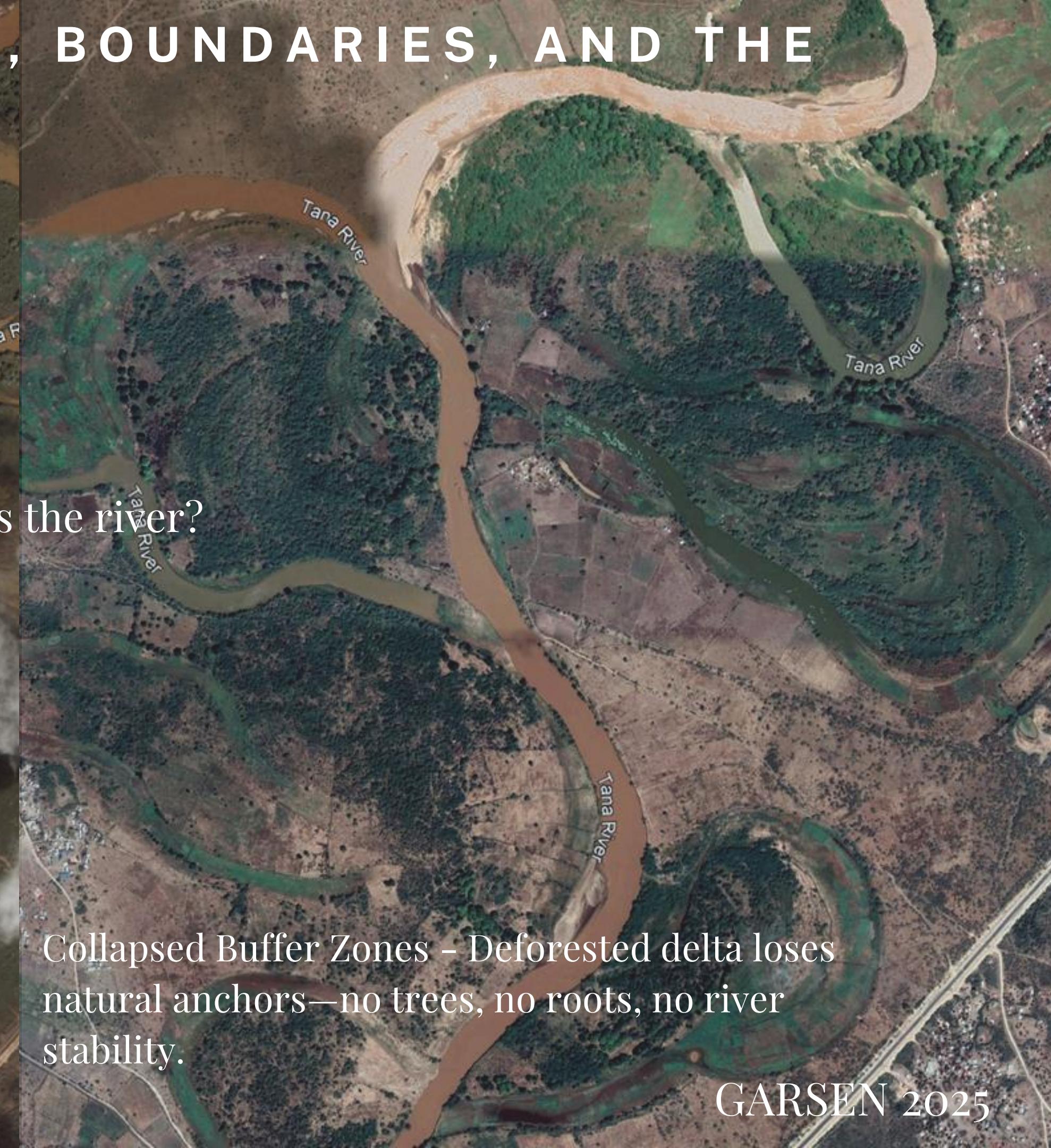


# A RIVER DIVIDED: ETHNICITY, BOUNDARIES, AND THE POLITICS OF ACCESS



River Migration - Charcoal burning and vegetation loss expose soil to sun and rain leading it to crumble like biscuits. The resultant effect is river changing paths

GARSEN 2007



Which is the river?  
Collapsed Buffer Zones - Deforested delta loses natural anchors—no trees, no roots, no river stability.

GARSEN 2025

Winners and Losers - When the river shifts, one community gains water access, another is left dry—conflict erupts over lost grazing or farmland.

Collapsed Buffer Zones - Deforested delta loses natural anchors—no trees, no roots, no river stability.



No Mapping, No Mediation - TARDA and land agencies have not mapped shifting channels or zoned new access fairly.

Result: Displacement and Violence - Farmers lose fields, pastoralists lose water—both blame each other. The river becomes the battlefield.

# THE TANA RIVER PARADOX – WHEN WATER INFRASTRUCTURE UNDERMINES ITSELF

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## The Seven Forks Scheme at Risk

Kenya's Seven Forks dams provide over 65% of hydropower, regulate floods, and support irrigation—but are now ecologically threatened.

### Siltation Crisis

- Deforestation and farming upstream accelerate soil erosion.
- Dams like Masinga have lost over 20% capacity due to sediment buildup.
- Impacts: reduced power output, weaker flood control, costly maintenance, and shorter dam lifespans.

## The Zero-Sum Paradox

- Dams are built to secure water—but unprotected catchments upstream destroy that security.
- Forested zones are cleared, sending silt and chemicals into reservoirs.

## Policy & Planning Gaps

- No dam project has a fully funded catchment management plan.
- Agencies like TARDA, WRA, NEMA, and counties work in silos.
- Riparian zones are unmapped and unprotected.

# THE TANA RIVER PARADOX – WHEN WATER INFRASTRUCTURE UNDERMINES ITSELF

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## Community Fallout in Lower Tana

- Unpredictable floods and flows harm farmers and pastoralists.
- Irrigation schemes like Hola and Bura stall due to unstable water supplies.

## Irony & Injustice

- Billions are spent on hard infrastructure, while natural infrastructure is neglected.
- Upstream polluters go unchecked, while downstream communities bear the burden.



# COASTAL RIPARIAN CRISIS: MANGROVES, MONEY & MISMANAGEMENT

- Coastal riparian zones face unique pressures: tourism, real estate, ports.
- Setbacks often ignored or inconsistent: 60m from high water mark under EMCA vs county zoning loopholes.
- Mangroves, wetlands, estuaries are ecologically vital but heavily encroached.
- Hotels, villas, ports, and roads built dangerously close to the shoreline—few demolitions enforced.
- Coastal riparian land is critical for climate resilience (flooding, storm surge, biodiversity).



# **SECTION 6: REFORMS & THE WAY FORWARD**

**TOWARDS SUSTAINABLE RIPARIAN GOVERNANCE – FROM CRISIS TO CLARITY**

# **FIXING THE RIVERBANK: MULTI-LAYERED SOLUTIONS**

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- Create a National Riparian Authority to lead mapping, enforcement & coordination.
- Harmonize laws on riparian widths (6m, 30m, natural buffer) across agencies.
- Digitize riverbanks using GIS & MCDA for smarter planning and zoning.
- Categorization of rivers according to their size and significance
- Riparian zone use/ utilization (compatible land uses)
- Just like the roads, rivers should be marked where equidistant pillars are used to show the extent of the riparian land
- Scientific research to test the validity of the American Riparian laws in Kenya

**“ Sustainable protection needs law, tech, culture—and national resolve. ,”**

# SURVEYORS AS RIVERKEEPERS

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- Beyond boundaries: Surveyors now guide land use, planning, and riparian conservation.
- Must map curved riverbanks, not just straight lines—using GNSS, drones, and field data.
- Integrate GIS layers (flood zones, wetlands, vegetation) into land systems.
- Work with WRA/NEMA to align legal and ecological boundaries.



# RIPARIAN LAND: NOT WASTELAND, BUT LIFELINE

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- Vital Ecosystems: Riparian zones purify water, prevent floods, and support biodiversity.
- Must Be Planned & Protected: Integrate into zoning, enforce boundaries, and treat as public heritage.

## Call to Action:

- Policymakers: Create a dedicated riparian authority.
- Surveyors/Planners: Map and protect riparian reserves.
- Communities: Value and preserve these life-giving corridors.



# PROPOSED NATIONAL RIPARIAN POLICY FOR KENYA

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## Redefine & Classify Riparian Zones

- No blanket 30m rule – use ecological function & river hierarchy
- Classify by size, land use (urban/rural/forest/arid)

## Map & Register All Riparian Land

- Use GNSS, drones, LiDAR
- Beacon, digitize, and register riparian zones as public land
- Link to Ardhisasa & RIMs

## Create National Riparian Authority (NRA)

- Empowered to map, enforce & monitor
- Coordinate NEMA, WRA, Survey, Counties
- Public geo-portal for transparency

## Integrate into Law & Planning

- Amend Survey Act, Land Act, PLUPA
- Make riparian zones part of title deeds & zoning
- Require EIA to flag riparian presence

## Protect & Restore Rivers

- Ban farming, charcoal, & building in sensitive zones
- Promote community-led buffer restoration & eco-parks

## Educate & Reconnect with Culture

- Nationwide awareness on riparian value
- Revive sacred traditions & involve elders in governance

**Securing Our Rivers Through  
Law, Mapping & Stewardship**

## CLARION CALL

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“ Let the rivers breathe, let the land live, let the future flow ”

We must act now to protect and sustainably manage riparian zones, ensuring clean water, healthy ecosystems, and a secure future for all.

# Thank you!

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Dr. Silas M Muketha, PhD  
ISK, PRE-AGM Conference  
29 May, 2025

# APPENDIX

# RIPARIAN LAND GOVERNANCE: GLOBAL LESSONS FOR KENYA

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## UK (Broadmeadow & Nisbet, 2004)

- No one-size-fits-all riparian width; should depend on soil, vegetation, slope, and topography.
- Suggested widths: 10–30m, with up to 60–70m on erodible soils and steep slopes.

## USA

- States apply variable widths: 7.5m–100m+ depending on the function (e.g., erosion control, wildlife habitat, water purification).
- Riparian width is tied to use-function fit, not fixed buffer.

## Malaysia

- Uses variable riparian widths based on river width: e.g., 50m for rivers >40m wide.
- Distinction between fixed width for simplicity vs. ecological width for sustainability.

## Benin (West Africa)

- Emphasis on protecting riparian forests as biodiversity corridors.
- Iceland
- River management integrates public participation, GIS, and multi-sectoral collaboration.

## **Guidelines for Riparian Widths in Malaysia**

<b>Recommended Riparian Widths in Britain Based on Size of Watercourse.</b>	
<b>Width of Watercourse Channel (Metres)</b>	<b>Recommended Riparian Width (Metres)</b>
≤1	5
1-2	10
>2	20

<b>River Width (m)</b>	<b>Width of Riparian Zone (m)</b>
>40	50
20-40	40
10-20	20
5-10	10
<5	5