



MICRO-CREDENTIAL

LAND MANAGEMENT IN CENTRAL ASIA

7.- Theoretical Foundation of Land Resource Management

Strategic Directions of Land Management

LM-W07-V48

Strategic Directions of Land Management

Recovering Nature for Growth, Health, and Security



Nature Is Our Bedrock

Nature underpins every dimension of modern society — from the food on our plates and the water in our rivers to the stability of our economies and the security of our communities. Yet this bedrock is eroding beneath our feet.

Unsustainable land use practices — intensive agriculture, urban sprawl, habitat fragmentation, and pollution — are steadily degrading the natural systems that have supported human civilization for millennia.

→ National Security

Degraded landscapes increase vulnerability to climate shocks, supply chain disruption, and resource scarcity.

→ Public Health

Nature-depleted environments are linked to poorer air and water quality, rising mental health burdens, and greater disease risk.

Why It Matters Now

→ Economic Stability

Natural systems provide services worth trillions — clean water, pollination, climate regulation — that underpin entire industries.

Inaction carries a heavy price. When we allow natural systems to degrade, we set in motion a cascade of interconnected consequences that threaten every dimension of societal well-being.

Food & Water Security

Soil degradation, aquifer depletion, and collapsing pollinator populations directly threaten our capacity to feed the nation sustainably. Without healthy land, agriculture is on borrowed time.

Climate Vulnerability

Degraded wetlands, deforested hillsides, and paved floodplains amplify flooding, intensify urban heat islands, and remove vital carbon sinks — accelerating the very crises we must manage.

Economic Uncertainty

Businesses and investors face growing exposure to nature-related financial risk. Supply chains dependent on healthy ecosystems become fragile, reducing long-term resilience and growth potential.

Our Natural Infrastructure is Failing



The warning signs are visible in every cracked riverbed, barren hillside, and silent hedgerow. The time to act is now.



Beyond Conservation

For decades, the dominant model of environmental policy has been protection — safeguarding the best remaining habitats behind designated boundaries. That approach, while valuable, is no longer sufficient. Nature is declining too fast and too broadly for protection alone to reverse the tide.

Active Recovery

The new paradigm demands that we move from passive preservation to active recovery — restoring degraded habitats, reconnecting fragmented landscapes, and enabling ecosystems to regenerate their own resilience. Recovery, regeneration, and resilience must become the defining principles of modern land management.

Natural England's Vision: A New Approach

Nature as National Investment

Natural England's vision reframes how we think about the natural environment — not as a constraint on development or an optional amenity, but as a vital, productive investment in the nation's long-term future.

Healthy ecosystems generate returns in flood protection, clean air, carbon storage, food security, and human well-being that no engineered solution can fully replicate.

Integrating Nature into Everything We Build

Homes

Green design standards that embed biodiversity net gain and accessible green space into every new development.

Infrastructure

Transport and energy networks planned in harmony with nature corridors, not at their expense.



The Goal: Abundant, Wilder, Richer, Accessible Nature

The ambition is not nostalgia. We are not seeking to freeze nature in a historical snapshot or return to a romanticized past. We are seeking something more dynamic and more powerful.

Abundant

More species, more habitats, more biomass — a measurable increase in the quantity and health of nature across the landscape.

Richer

Greater biodiversity — more species, more genetic variety, more ecological interactions sustaining the web of life.

Wilder

Ecosystems given the space and conditions to self-organize, with natural processes driving regeneration and complexity.

Accessible

Nature recovery that reaches everyone — urban and rural, young and old — delivering equitable health and well-being benefits across society.



Nature Recovered: A Blueprint for Tomorrow.

Resilient, dynamic ecosystems — abundant with life, accessible to all, and built to endure.

Scale Over Isolation

Individual nature reserves and isolated habitat patches are insufficient to reverse biodiversity loss at meaningful speed. The strategic shift is toward landscape-wide nature recovery — connecting habitats across entire catchments, regions, and ecological networks.

This means working across land ownership boundaries, aligning incentives across sectors, and thinking in terms of ecosystems rather than parcels.

Enabling Others

Natural England's evolving role is increasingly that of an enabler, not a sole deliverer. By empowering and trusting partners — farmers, local authorities, land managers, NGOs, and businesses — to act for nature, we can multiply impact far beyond what any single organization could achieve alone.

This shift demands clarity of purpose, generosity of knowledge-sharing, and genuine trust in partnership.

Raised Risk Appetite

Meaningful nature recovery requires bold decisions. Natural England is raising its willingness to take calculated risks — backing ambitious projects with uncertain outcomes, rather than defaulting to cautious inaction. Progress demands the courage to test new approaches, learn from evidence, and scale what works.

Outcome-Focused Delivery

The measure of success is no longer process compliance — it is tangible ecological and social results. Are habitats recovering? Are species returning? Are communities benefiting? Prioritizing real-world outcomes over bureaucratic adherence ensures accountability is tied to what truly matters: nature's recovery on the ground.

Targeted Investment

Not all land is equal in its potential to deliver for nature and communities. Strategic targeting focuses finite resources on areas where interventions will generate the greatest compounded benefits — for biodiversity, water quality, flood resilience, carbon sequestration, and public access.

This means using evidence, spatial data, and local knowledge to prioritize wisely rather than spreading effort too thinly.

Root Cause Solutions

Treating symptoms of environmental decline — removing invasive species here, restoring a pond there — achieves limited, temporary gains. Lasting recovery requires addressing the fundamental drivers of decline: unsustainable agricultural practices, planning policies that ignore natural infrastructure, and economic systems that fail to price nature's value.

1

Community Engagement

Local voices and lived experience shape decisions that endure, building the social license for ambitious nature recovery.

2

Policy Reform

Updating planning, agricultural, and fiscal frameworks to align incentives with ecological recovery at every level.

3

Ecological Restoration

On-the-ground action to restore habitats, reintroduce species, and reconnect fragmented nature networks.

Nature and Prosperity Are Inseparable

The narrative that pits economic growth against environmental protection is fundamentally outdated. Recovering nature is not a brake on prosperity — it is one of its most reliable engines. Healthy ecosystems reduce the costs of flooding, water treatment, and healthcare while generating new markets in green technology, sustainable agriculture, and nature-based tourism.

Financial Certainty Through Nature

Nature-based solutions offer something that engineered alternatives cannot always guarantee: long-term resilience. Restored floodplains absorb extreme rainfall. Healthy soils maintain agricultural productivity through drought. Coastal habitats buffer communities from storm surge. Investing in nature delivers compounding, self-reinforcing returns over time.

Just as roads, power grids, and broadband networks are considered foundational to a functioning modern economy, so too must natural systems be recognized as essential national infrastructure — deserving equivalent investment, planning protection, and policy commitment.



Alongside Transport Networks

Green corridors and ecological networks connect landscapes in ways that mirror the connectivity function of road and rail — enabling the movement of species, water, and genetic diversity essential for resilience.



Alongside Energy Systems

Natural carbon sinks — peatlands, woodlands, coastal habitats — are as strategically important to Net Zero as any solar farm or wind turbine, yet receive a fraction of the investment and policy attention.



Alongside Water Infrastructure

River catchments, wetlands, and floodplains function as natural water infrastructure — storing, filtering, and releasing water — reducing the burden on costly engineered water management systems.

Development That Gives Back

The challenge is not to halt development, but to ensure that every home built, every road laid, and every energy installation sited contributes to — rather than detracts from — nature recovery.

Biodiversity Net Gain requirements, green infrastructure standards, and strategic environmental assessment are the tools that make responsible development possible at scale.

What Responsible Development Delivers

- **Green Spaces**

Parks, community woodlands, and nature corridors woven into the fabric of new developments, accessible to all residents.

- **Cleaner Environments**

Trees, wetlands, and green roofs filtering air pollution, managing surface water runoff, and cooling urban heat.

- **Resilient Communities**

Ecosystems embedded in development providing long-term protection against flooding, drought, and climate extremes.



New developments designed in harmony with natural systems create healthier, more resilient, and more desirable places to live — demonstrating that growth and nature recovery are not just compatible, but mutually reinforcing.

A Healthy Environment for a Healthy People

The links between a healthy natural environment and human health are profound and well-evidenced. Access to green space reduces stress, lowers rates of depression, and supports physical activity. Clean air and clean water, delivered by functioning ecosystems, prevent disease and reduce the burden on health services.

Nature and National Security

Resilient natural systems are a form of national security infrastructure. Ecosystems that can absorb extreme weather events, sustain food and water production through climate stress, and sequester carbon reduce the vulnerabilities that destabilize societies. Nature recovery is, at its core, a security strategy for an uncertain climate future.



Clean Water Security

Healthy riparian habitats, wetlands, and upland peatlands act as natural water filters and storage systems, reducing treatment costs and maintaining the reliable supply of clean drinking water that communities depend upon.



Sustainable Agriculture

Thriving soil ecosystems, intact pollinator networks, and healthy water catchments are the biological foundations of a productive and sustainable food system — one capable of feeding future generations without consuming the natural capital it depends on.

Intergenerational Security

The decisions made today about how land is managed will determine whether the next generation inherits a food and water system capable of meeting their needs — or one in irreversible decline.



With Nature Recovery

Restored floodplains and natural wetland systems absorb excess rainfall, slow water flow, protect downstream communities, and deliver these vital services at a fraction of the cost of hard flood defenses — while simultaneously supporting biodiversity and carbon storage.

Without Nature Recovery

Degraded wetlands and deforested catchments amplify flood events, expose communities to escalating damage costs, and leave populations vulnerable to worsening climate extremes with no natural buffer to absorb the shock.

From Commitment to Action

Natural England's primary role is to translate high-level government environmental commitments into concrete, measurable action on the ground. This requires not just scientific expertise and regulatory authority, but the organizational agility to reform ways of working, align incentives, and respond to the pace of ecological change.

This means actively reforming both advisory and regulatory functions — moving from reactive gatekeeping to proactive nature recovery at the scale the crisis demands.

Advisory Reform

Shifting from case-by-case advice to strategic, landscape-scale guidance that empowers confident delivery by partners.

Regulatory Reform

Streamlining processes to reduce barriers to nature recovery projects while maintaining robust environmental protection standards.

Cultural Reform

Embedding a delivery mindset and outcomes-focused culture throughout the organization at every level.

No single organization can deliver nature recovery at the scale required. The challenge is too large, the landscape too varied, and the levers of change too distributed across society for any one body to succeed alone.



Farmers & Land Managers

The custodians of most of England's land, whose day-to-day decisions determine whether habitats recover or decline. Sustainable farming incentives and trusted advice are the keys to unlocking their potential.



Local Authorities

Local planning and green infrastructure decisions shape the ecological framework within which communities live. Empowered local authorities are essential translators of national ambition into local reality.



NGOs & Conservation Bodies

Bringing deep ecological expertise, community trust, and on-the-ground capacity that complements statutory bodies and extends the reach of nature recovery far beyond government's direct footprint.

Environmental Improvement Plan

The Environmental Improvement Plan sets out the government's ambition to leave the environment in a significantly better state than we found it — including binding targets on species abundance, water quality, air quality, and tree and woodland cover. Natural England is a central delivery partner for these legally binding commitments.

30×30

Protecting 30% of land and sea for nature by 2030 — a landmark global commitment requiring accelerated designation, restoration, and management of priority habitats.

Species Abundance

Halting the decline of species abundance by 2030 and achieving measurable recovery by 2042 — targets that require action across the entire landscape, not just designated sites.

Net Zero & Biodiversity Targets

Net Zero 2050

Restoring peatlands, expanding woodlands, and protecting blue carbon habitats are critical nature-based contributions to the UK's legally binding Net Zero pathway.

Collective Action for Ambitious Goals

The partnerships that will deliver nature recovery span every sector of society — uniting scientific expertise, lived experience, policy authority, and community passion in service of a shared vision for the natural environment.

30%

Land Protected

Target for land protected for nature by 2030 under the 30×30 commitment.

2042

Recovery Target

The year by which measurable species abundance recovery must be achieved.

£56B

Nature's Value

Estimated annual value of ecosystem services provided by UK nature to the economy.

The vision is within reach. A future where nature thrives across our landscapes — supporting economic growth, safeguarding public health, and securing communities against climate change — is not a distant aspiration. It is the achievable outcome of the strategic shifts set out in these pages.

Growth

A green economy built on the foundation of healthy, productive ecosystems that generate lasting prosperity.

Security

Resilient natural systems protecting food, water, and communities from the shocks of a changing climate.

Health

Communities and individuals thriving in clean, accessible, nature-rich environments that support well-being for all.



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