NATURE-BASED SOLUTIONS FOR ADAPTATION
BRIEF SERIES

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Too often, Nature-based Solutions (NbS) fail not because nature doesn't work – but because people are left out. This brief reframes social and environmental safeguards (ESS) as strategic enablers of effective climate adaptation. Supported by on-the-ground experiences and practices, the brief demonstrates how understanding people-nature interlinkages, addressing community necessities, and integrating diverse knowledge systems reduces risk, prevents maladaptation, and delivers durable adaptation outcomes at scale.

SAFEGUARDING NATURE, EMPOWERING COMMUNITIES:
Implementing Social & Environmental Safeguards in NbS for climate adaptation

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WHY SAFEGUARDS ARE THE BACKBONE OF NBS

Nature-based Solutions (NbS) are increasingly promoted as effective and flexible responses to climate change, yet their success depends as much on social processes as on ecological design. When environmental and social safeguards (ESS) are weak or absent, NbS can unintentionally reinforce existing inequalities, restrict access to land and natural resources, or degrade ecosystems over time. Exclusion from decision-making, elite capture of benefits, loss of customary rights, and maladaptation are common risks that undermine both climate resilience and community trust.

Why Communities Disengage

Common reasons NbS lose community support include:

- Communities are consulted too late, superficially, or unevenly, excluding marginalised groups
- Communities do not feel ownership over the interventions
- Immediate livelihood needs are ignored in favour of long-term environmental goals
- Benefits are captured by local elites or external actors
- Restrictions on land or resource use are imposed without consent
- Grievance and feedback mechanisms are absent, unsafe, or inaccessible, especially for women

Safeguards should not be understood as procedural requirements that slow implementation. When integrated early and applied consistently, they act as strategic enablers that improve the effectiveness, legitimacy, and durability of NbS. Safeguards help ensure that interventions are socially accepted, environmentally sound, and responsive to local realities, reducing the likelihood of conflict, project failure, or unintended harm. They are non-negotiable yet flexible when designing NbS that deliver long-term adaptation benefits for both people and ecosystems.

In practice, these safeguards are most effectively operationalised through Environmental and Social Management Systems (ESMS). An ESMS provides a structured yet adaptive framework for identifying risks, applying precautionary measures, and responding to social and environmental issues as they emerge over the lifecycle of an NbS intervention. By embedding safeguards into planning, implementation, and monitoring processes, ESMS help translate high-level safeguard principles into consistent, on-the-ground action – particularly in complex or high-risk contexts.

SEEING THE WHOLE SYSTEM: PEOPLE-NATURE INTERLINKAGES IN PRACTICE

Effective safeguarding begins with recognising that ecosystems are deeply intertwined with people's lives, livelihoods, and identities. For many communities, nature underpins food security, income, cultural practices, and survival during climate shocks. Understanding how different groups access, use, and manage natural resources is therefore essential for identifying safeguard risks and opportunities.

This requires moving beyond simplified notions of "community" to examine power relations, differentiated vulnerabilities, and patterns of dependency. Participatory approaches—such as resource mapping—help reveal how proposed NbS intersect with livelihoods, social dynamics, biodiversity considerations, and policy frameworks. Experiences from community-based NbS initiatives in Morocco and Senegal, led by Socodevi, illustrate how safeguards are strengthened when people–nature interlinkages are understood through lived experience.

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© Socodevi - Natur'ELLES - NAbSA - Ndèye Banna Badji

In coastal **Senegal**, Ndèye Banna Badji, a participant in the **Natur'ELLES** Environmental Leadership and Climate Agency Program, previously witnessed and engaged in harmful environmental practices, because she did not have the context, information, or confidence to change practices. Through the programme, she gained knowledge of climate impacts and leadership skills, enabling her to identify harmful practices and their gender-specific impacts. With Socodevi's technical and material support, she transitioned to ecosystem-friendly oyster farming, reducing her workload and improving efficiency. She is now President of the Thiobon village cooperative.

In the forest landscapes of Khénifra National Park, **Morocco**, participatory assessments under the **FERMA** project highlighted how women's livelihoods, customary practices, and ecosystem stewardship are deeply interwoven. By recognising traditional knowledge and fostering respectful dialogue rooted in local history and aspirations, communities took ownership of NbS interventions and demonstrated sustained commitment to their implementation—reducing exclusion risks while strengthening long-term stewardship.

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Understanding people–nature interlinkages also requires attention to policy contexts. National environmental policies may exist but are often weakly enforced, poorly communicated, or inadequately understood at the local level. Communities may be unaware of relevant regulations or experience them as conflicting with livelihood priorities. For example, conservation policies may be perceived as prioritising biodiversity over human safety where human–wildlife conflict is prevalent.

> " Over time, our behaviour toward the forest and the resources it provides has evolved. In the past, we harvested aromatic and medicinal plants by cutting the roots. Today, we have adjusted our practices. We no longer cut the roots, we harvest responsibly, and we make sure to preserve natural resources.
> - A cooperative member from Morocco "

In **Zimbabwe**, the MCC **LINCZ** project addressed these gaps through policy consultations with communities and local authorities. Capacity building for governance structures and awareness-raising among community members strengthened ownership of environmental protection and improved collaboration, enabling more effective local implementation of national policies.

© Pexels - D Keats - Endangered African Wild Dog

Environmental impact assessments (EIAs)[1] remain a key safeguard tool. Despite assumptions that NbS automatically deliver positive biodiversity outcomes, this is not guaranteed. EIAs enable practitioners to anticipate environmental and social risks early, allowing interventions to be adapted to prevent exclusion or harm.

Environmental safeguards are particularly important for managing less visible risks. Experience from nature-based carbon initiatives supported by the **WALD Innovation Facility** shows how ESMS can prevent unintended ecological harm, such as the introduction of invasive alien species (IAS). Restoration projects prioritised native species in protected areas, supported by ecological risk screening using authoritative biodiversity databases, including the **IUCN Red List of Threatened Species** and the **IUCN global invasive species**. Introduced species are permitted only in clearly delineated buffer zones under agroforestry systems, where species such as coffee, cocoa, or avocado are integrated for livelihood benefits. These exceptions are subject to strict ecological screening and management requirements to ensure that introduced species do not spread into protected areas. This approach reflects the precautionary principle, ensuring that restoration interventions do not create unintended environmental harm.

Case Study 1
In **Kenya**, community-led grassland restoration initiatives, supported by Conservation International and funded by the Global EbA Fund, revealed how climate stress, land degradation, and competition over natural resources were contributing to both human-human and human-wildlife conflict. Participatory mapping revealed that proposed ecosystem restoration activities overlapped with seasonal grazing routes used by women-headed households. By identifying this risk early, project partners adapted restoration plans to protect livelihood access, strengthening both community support and ecological outcomes. Read more about this work **here**.

© Conservation International - Kenya - Global EbA Fund

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[1] A process of evaluating the likely environmental impacts of a proposed project or development, taking into account inter-related socio-economic, cultural and human-health impacts, both beneficial and adverse (**UNESCO 2026**).

BLENDING KNOWLEDGE SYSTEMS FOR BETTER ADAPTATION

Safeguarding NbS also depends on how knowledge is generated and applied. Scientific evidence provides critical insights into climate trends and ecosystem dynamics, but on its own often fails to capture local realities. Traditional and local knowledge, grounded in lived experience and long-term observation, offers essential understanding of environmental change and social impacts.

Combining these knowledge systems through co-production improves both the quality and legitimacy of NbS. When communities are involved in generating, validating, and interpreting data, interventions are more locally appropriate, reducing maladaptation risks and strengthening ownership.

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START WITH WHAT MATTERS MOST: ADDRESSING COMMUNITY NECESSITIES

NbS are unlikely to succeed if basic needs and immediate priorities are ignored. Food security, water access, income stability, and physical safety shape how communities engage with adaptation initiatives and whether participation can be sustained. Safeguarding therefore requires understanding vulnerabilities and necessities before introducing NbS interventions.

Addressing immediate needs does not undermine long-term environmental goals. Rather, NbS that deliver tangible short-term benefits while building long-term resilience are more likely to gain and sustain community support. When livelihoods and security are overlooked, even well-intentioned projects risk resistance or disengagement.

Socodevi's cooperative-based NbS approaches demonstrate how linking ecosystem restoration to income generation and inclusive governance strengthens safeguards. Cooperative structures enable collective resource management, livelihood diversification, and increased participation of women and youth in decision-making, aligning immediate necessities with long-term environmental outcomes.

Case Study 2

In **Nepal**, WWF has applied this approach to address increasing human–wildlife conflict exacerbated by climate change and habitat pressure. Scientific data on wildlife movement and habitat connectivity were combined with local observations from farming communities experiencing crop loss and safety risks. Traditional knowledge helped identify seasonal patterns and high-risk areas that were not fully captured by ecological models alone. Integrating these perspectives informed EbA measures that reduced conflict while safeguarding biodiversity, illustrating how blended knowledge systems enhance both social and environmental outcomes. Learn more about this **case study** and **project**, funded by the Global EbA Fund.

© WWF - Nepal - Global EbA Fund

Case Study 3

In southwest **Bangladesh**, communities in the Betna-Marichhap river basin face chronic flooding and sedimentation that threaten both ecosystems and livelihoods. Through a participatory planning process, BothENDS worked with communities and government actors to develop a Community-Based Tidal River Management approach. The resulting 'People's Plan' prioritised livelihood security, land access, and inclusive governance alongside ecosystem restoration. By grounding safeguards in community necessities, the initiative built strong local ownership and created an institutional framework for long-term stewardship. Learn more about this Global EbA Fund Project **here**.

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PUTTING SAFEGUARDS INTO PRACTICE

Safeguards are most effective when embedded across the full lifecycle of NbS projects, from design and implementation to monitoring and learning. Social safeguards must go beyond formal compliance, particularly inclusion, gender sensitivity, and Free, Prior and Informed Consent (FPIC)[2] for Indigenous Peoples and customary land holders. In contexts where rights-holders lack legal recognition or institutional support, effective FPIC requires recognising customary governance systems, engaging trusted intermediaries, and documenting land and resource use through participatory processes.

In many contexts, Indigenous Peoples and customary landholders are not formally recognised within national legal frameworks. The WALD Innovation Facility addressed this gap by adopting ESMS approaches that identify rights-holders based on self-identification, customary land use, cultural practices, and social distinctiveness, rather than narrow legal definitions. This enables consistent application of safeguards and FPIC even in legally ambiguous environments.

Socodevi's community-led communication approaches, including environmental storytelling, further strengthened safeguards by positioning community members as knowledge producers rather than beneficiaries. Research conducted under the Natur'ELLES project helped define fishing, nursery, reforestation, and natural regeneration areas, resulting in some zones designated as sacred and protected through community consensus.

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[2] Free, Prior, and Informed Consent (FPIC) is a specific, internationally recognized human rights principle allowing Indigenous Peoples to grant or withhold consent to projects affecting their lands, resources, or territories. It ensures consent is given freely (without coercion), prior (before authorization), and informed (with full disclosure) (**OHCHR 2026**).

Treating safeguards as ongoing processes rather than one-off requirements allows practitioners to respond to emerging risks and changing conditions. Accessible and trusted grievance mechanisms are critical, particularly for women and marginalised groups. Experience from women-led NbS initiatives shows that leadership training and locally anchored feedback channels enable communities to raise concerns, influence decisions, and challenge exclusionary norms – supporting a shift from participation to leadership over time.

By linking risk identification, mitigation, monitoring, and grievance mechanisms within a single system, ESMS strengthen accountability and learning. This adaptive approach is essential in dynamic ecological and social contexts, ensuring that safeguards remain relevant, trusted, and effective as conditions change.in dynamic ecological and social contexts, ensuring that safeguards remain relevant, trusted, and effective as conditions change.

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