



# **Support options to grassland restoration in the context of climate change mitigation**

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Workshop on the focus area #2

„Restoring value to grasslands“

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**GLOBAL AGENDA OF ACTION**  
IN SUPPORT OF SUSTAINABLE LIVESTOCK SECTOR DEVELOPMENT

# Structure of the presentation

- Key messages
- Mitigation potential of different grassland-livestock measures
- Regulatory and market-based incentive mechanisms
- Possible support mechanisms for grasslands: GEF and UNFCCC
- Learning from REDD+
- Opportunities and challenges for a grassland agenda
- Possible components of a grassland agenda
- Conclusions

# Current situation

## Grasslands provide crucial economic, social and environmental functions

- Grasslands cover a total area of between 3.5bn ha (FAO 2010) and 5.3bn ha (White et al 2000) or about 26% - 40% of the world's ice-free terrestrial surface area.
- Livelihoods benefits: Extensive grasslands contribute about 7% of global beef production, 12% of sheep and goat meat production and 5% of global milk supply.
- Biodiversity benefits: 35 of the 200 WWF global ecoregions are grasslands
- Watershed related benefits: 25 of the 145 major watersheds made up of at least 50% grassland

**....but about 50% of grasslands are degraded and there is very limited investment to restore the production potential**

# Grassland value adding propositions

		Good resource base			
Good market access	Commercialization & intensification		Maintaining traditional systems		Poor market access
	Value-addition & diversification		Exit and alternative livelihoods		
		Poor resource base			

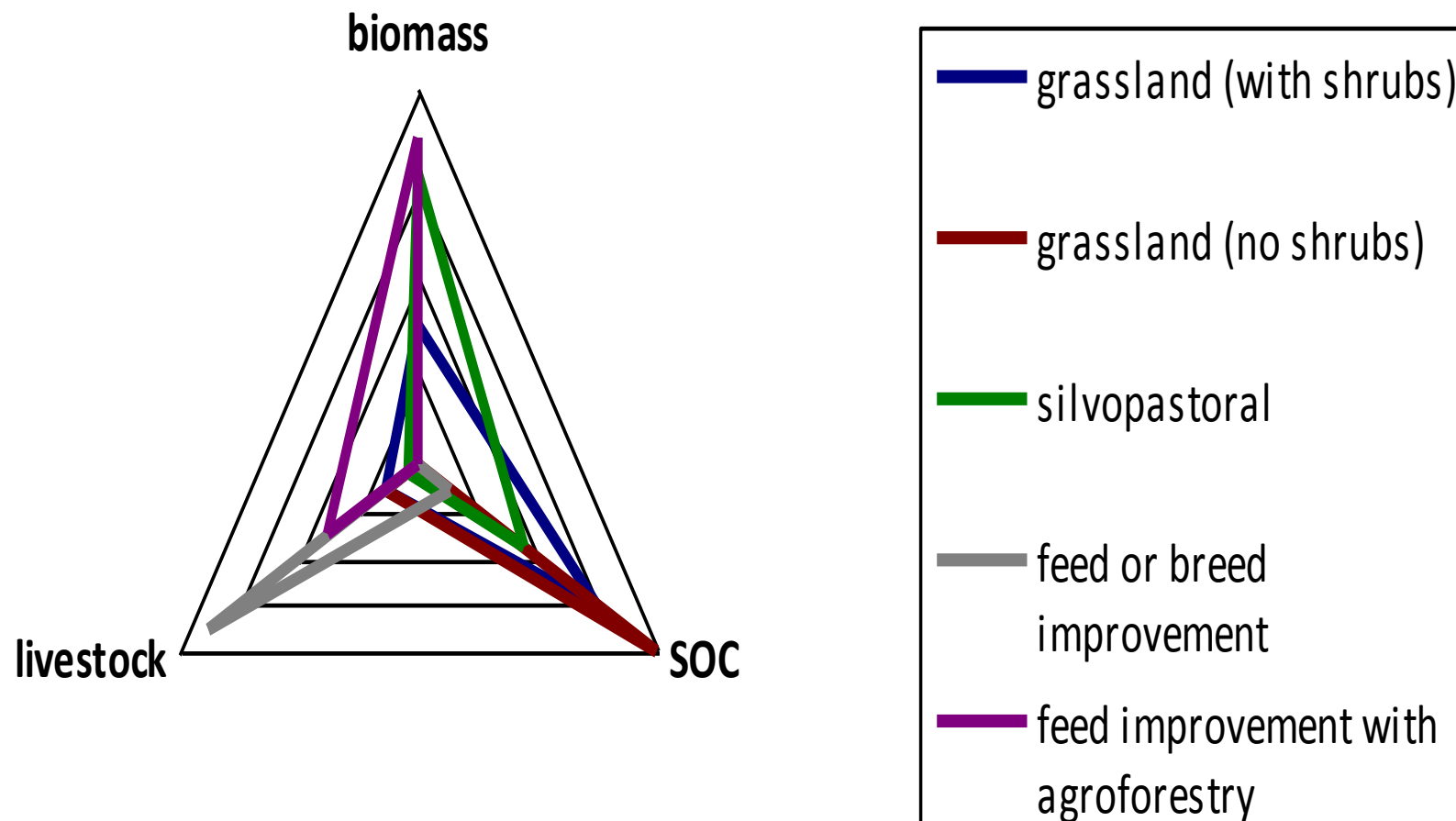
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Source Deyer et al 2012

## International Climate finance:

- **Carbon finance** for soil carbon sequestration and sustainable intensification related emission reductions , both supporting low carbon development
- **Adaptation finance** for the poorest of the poor in LDCs that are impacted most by climate change (=herders in vulnerable regions)

# Archetypes of mitigation potentials in different types of grassland-livestock system



NB: Axes represent % of total emission reductions, not absolute values



# Mitigation options in Inner Mongolia, China

**Baseline: degraded grasslands**



**Relocation**



**Irrigated Alfalfa fodder production**



**Restoration**



**Fattening station**



# Regulatory incentives for restoring value to grasslands

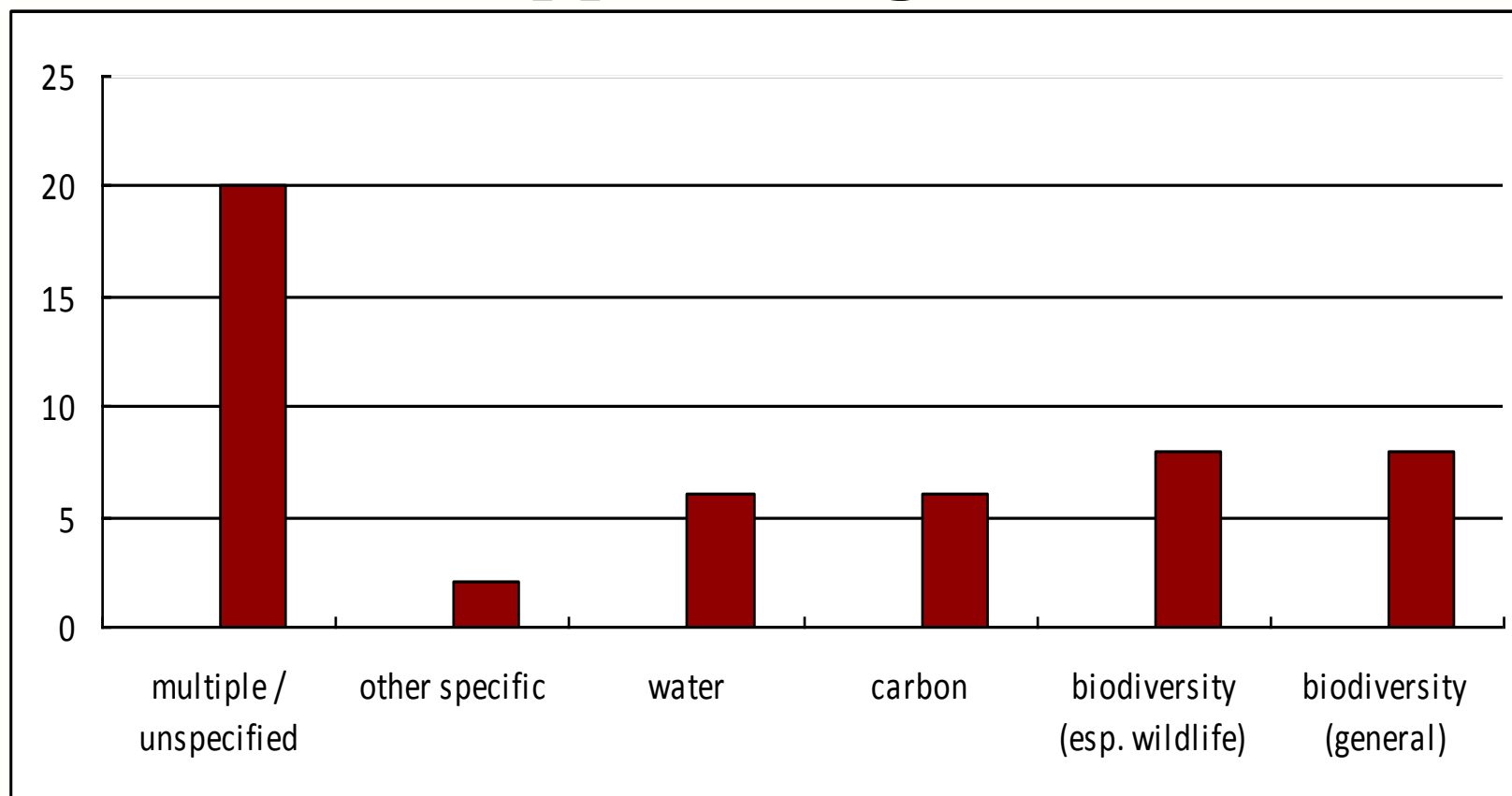
- **Subsidies or tariffs:** Removal or modification of domestic subsidies or tariffs that encourage unsustainable grassland management – or disincentives more efficient production – with international trading partners
- **Regulatory mandates:** Implementation and enforcement of regulatory mandates for adoption of improved grassland management practices, minimum standards or processes, lowering transaction costs for adoption
- **Regulatory infrastructure:** Investments in the regulatory infrastructure that lower the transition costs of adopting improved grassland management practices
- **Land use planning and tenure reform:** Investments in land use planning and tenure reform to support sustainable land management practices, enforcement, monitoring and improved governance
- **Sustainability criteria:** Creating, recognizing or mandating market-based sustainability criteria and labeling (within the borders of current WTO agreements)

# Market oriented incentives for restoring value to grasslands

- **Risk management:** Designing and supporting financial instruments that reduce or redistribute risks for investments in sustainable intensification
- **Monetizing grassland/carbon/ecosystem service revenue streams:** Financial instruments (e.g. bonds) monetizing grassland/livestock productivity and/or ecosystem services
- **Direct purchase:** Purchase or creation of sustained demand for carbon credits, potentially with a quota for credits derived from grassland restoration projects
- **Transition cost subsidies:** Creation of funds and financial instruments that subsidize upfront costs for transition to improved grassland management practices



# GEF support for grasslands



- Review covered 50 PES schemes in grasslands
- GEF has provided \$10.5bn in grants and leveraged \$51bn in co-financing since 1991 for over 2,700 projects.

# Grasslands in the UNFCCC context

## AWG-LCA

- **NAPs – National Adaptation Plans**
- **REDD+**
- **NAMAs – Nationally Appropriate Mitigation Actions**

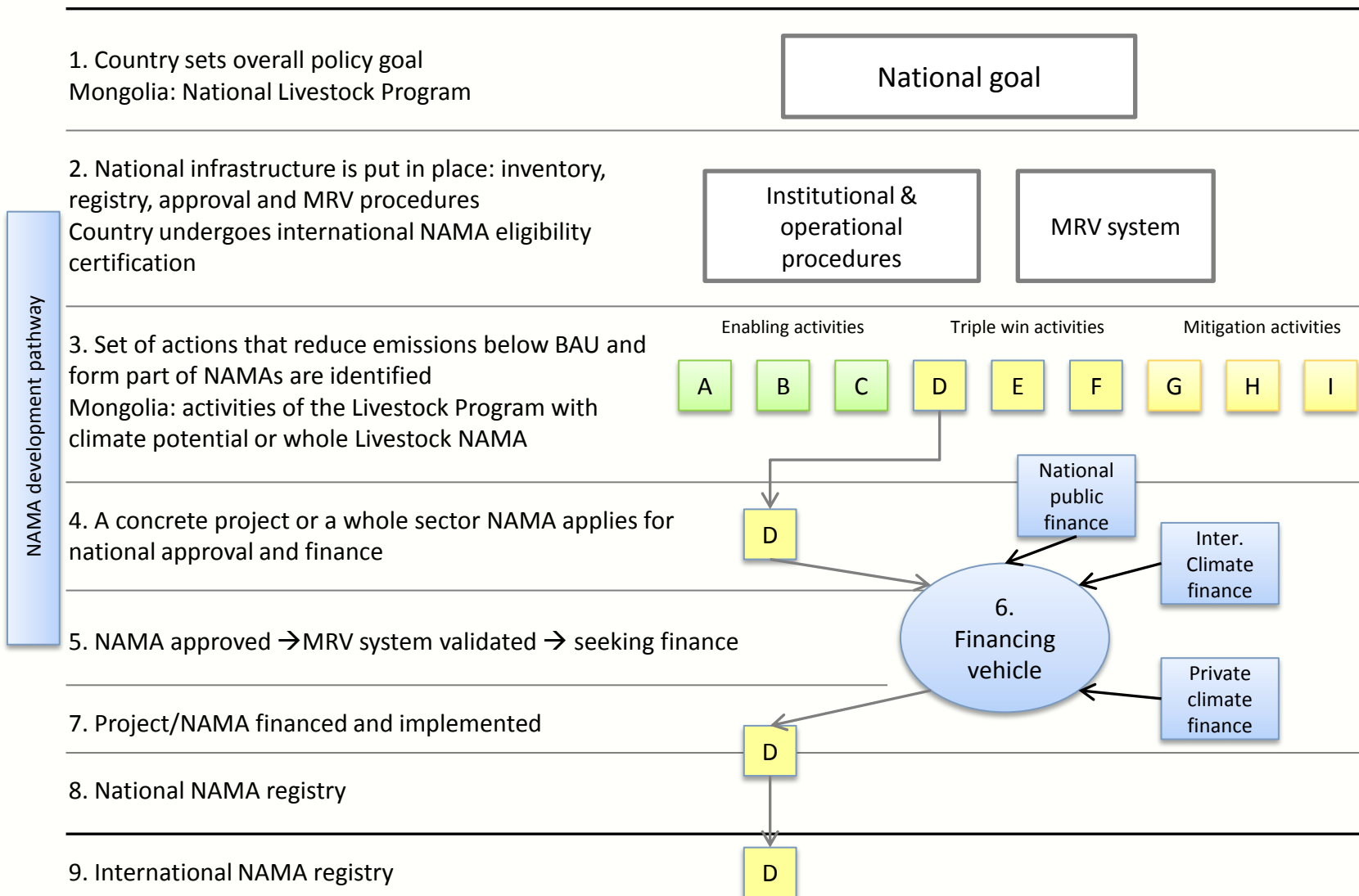
Country NAMA submissions	Proposed activities			
	Grassland restoration and conservation	Improved livestock management, including efficiency	Introduction / promotion of fodder crops	Livestock insurance
Brazil	83-104 Mt CO <sub>2</sub>	18-22 Mt CO <sub>2</sub>		
Ctrl. African Republic			x	
Chad			x	
Jordan	x	x	x	
Madagascar		x	x	
Mongolia		x		
Swaziland		x	x	x

- **Kyoto Protocol (CDM)**

# Nationally Appropriate Mitigation Actions

- Conceived in the Bali Action Plan in 2007 (COP13); confirmed and elaborated in Cancun in 2010 (COP16).
- Voluntary mitigation actions by developing countries.
- Any government-sponsored and prioritized policy, programme or project that results in measurable GHG reductions can be a NAMA.
- Enabled in part by domestic investments and in part by international financial support.
- Performance based the stringency of MRV depends on the source of finance.
- NAMA Registry will record information and facilitate the matching of action and support.

# NAMA development pathway



# Existing models for a global grassland agenda

- **Learning from REDD+, reasons for its prominence**
  - REDD+ are perceived to be low cost mitigation while simultaneously providing strong biodiversity benefits. The latter aligned the global biodiversity/wildlife lobby
  - Targets developing countries only and is less important for the competitiveness of high polluting but strategic industries
  - Considering the slow progress of the international climate change negotiations, many countries supported REDD+ to demonstrate commitment and readiness for action
- **The UN-REDD model for a programme of support**
  - National level activities (readiness)
  - International knowledge mgmt on MRV etc

# Opportunities and challenges for a grassland agenda

## STRENGTHS

- Restoring grasslands can provide food security, climate resilience and mitigation and biodiversity benefits at the same time
- Biodiversity value is exceptional, i.e. 35 of the WWF “Global 200” ecoregions are grassland

## WEAKNESSES

- Low cost economic mitigation (<\$20/ha/yr) is potentially limited in volume, i.e. <200MtCO<sub>2</sub>e
- Limited documentation of grassland restoration and its impact on livelihoods and the environment
- Economics of grassland restoration unclear for many ecoregions
- Many grassland areas are in zones where management will not determine soil carbon stock changes

## OPPORTUNITIES

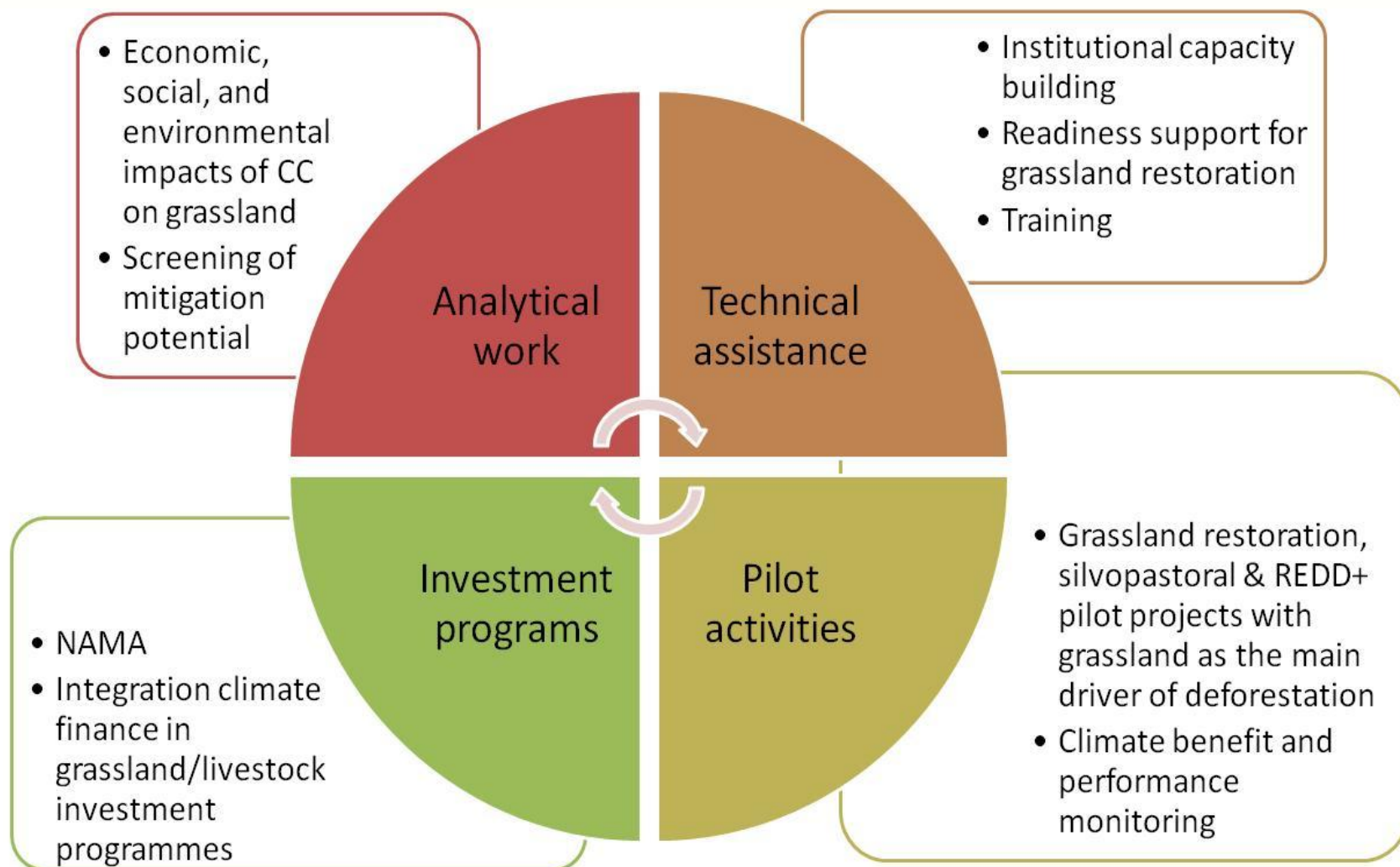
- Low productive and unsustainably managed grasslands are a major driver of deforestation and will receive attention.
- Value adding through the adoption of sustainable intensification measures, value chain development activities and PES
- Climate finance can support the transition to more sustainable grassland management systems

## THREATS

- Pastoral areas have diverse cultural heritage and indigenous land use rights are complex.
- Real potential to close the efficiency gap unclear



# Possible components of a global agenda of action



# Conclusions

- Development of climate-resilient and efficient grassland-livestock production systems is the priority with mitigation as a co-benefit
- Climate finance may add important resources and political momentum to act as a convening force for sustainable livestock/grassland intensification
- Carbon markets are currently less attractive to restore value to grasslands at scale compared to NAMAs
- A global agenda for action should start by aligning champion countries for fast start implementation and core investors for a dual programme focussing on national implementation and global knowledge generation/sharing



# Thank you for your attention!

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