



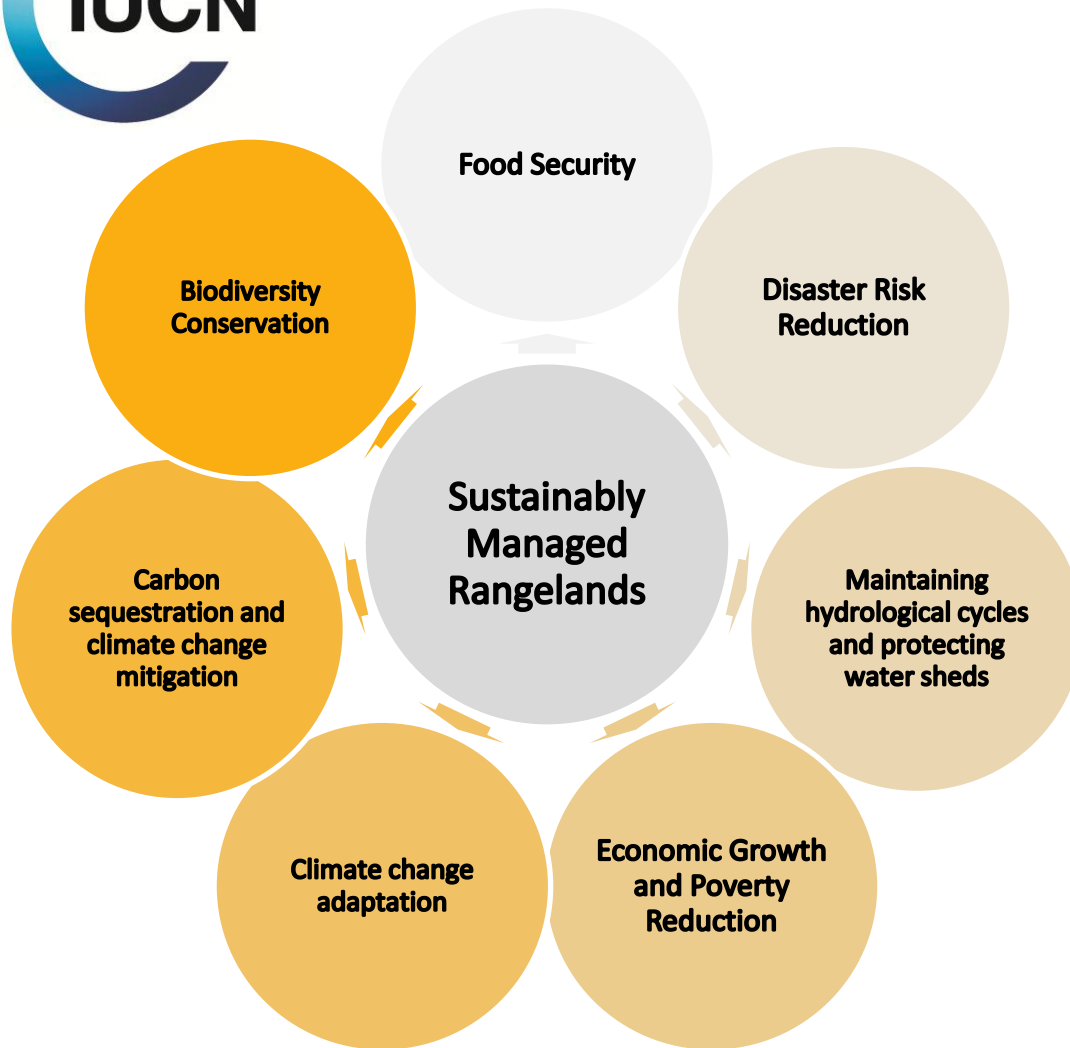
# **OVERVIEW OF APPROACHES FOR RANGELAND ASSESSMENT AND MONITORING**

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# WHAT ARE RANGELANDS – CHALLENGES IN DEFINING WHAT WE ARE MONITORING

- Rangelands cover approx. a third of the worlds surface area.
- Major vegetation types: grassland (predominant), shrubland, dry woodland, savannah etc.
- Consensus on rangeland definition is important for monitoring and assessments and there is no standard global definition yet.
- Rangelands can be defined by both ecological and social concepts.

# WHY MONITOR AND ASSESS RANGELANDS



- Rangeland ecosystems provide high value goods and services to local communities and global society.
- Monitoring rangeland health enables their sustainable management, ensuring continued provision of ecosystem services.
- Rangeland health “*the degree to which the integrity of the soil and the ecological processes of rangeland ecosystems are sustained*” (Committee on Rangeland Classification, National Research Council, 1994).

# DESIGNING MONITORING AND ASSESSMENT APPROACHES

**Monitoring:** *periodic observation of specific indicators.*

**Assessment:** *analysis and interpretation of data at a certain point in time.*

To design appropriate assessment and monitoring approaches:

- **1. Understand the management objectives:** Needs based approach to defining monitoring systems – end users.
  - Who is the end user and what is their capacity?
  - What kinds of information does the monitoring provide, is it appropriate?
  - Is it relevant to the management objectives?
  - How do new techniques fit with existing knowledge and approaches?

(Karl et al., 2009).

# DESIGNING MONITORING AND ASSESSMENT APPROACHES



## 2. Choosing a relevant scale for management needs and ecological processes :

- The scale of monitoring will be guided by practicalities and cost, with coarse-grain observations more suited for national or regional level monitoring and more focused observations suited for local-level decision making (Karl et al., 2009).
- Indicators for national level decision making may be unhelpful for the day-to-day management of rangelands.
- Participation is also crucial in identifying the right indicators for each scale.

# DESIGNING OF MONITORING AND ASSESSMENT APPROACHES

## 3. Identifying the right indicators to get the ecosystem level picture and these can be combined with socio-economic indicators:

- Rangeland monitoring systems should consider at least three criteria of ecosystem health or risk:
  - soil and site stability,
  - hydrologic function,
  - and biota

## 4. Participatory approaches to rangeland assessment and monitoring:

- Scientists participate with pastoralists to help improve their monitoring for sustainable rangelands management.
- Pastoralists participate in monitoring by a local authority (e.g. district)
- Local authorities and pastoralists participate in national assessment/monitoring



# SUPPORTING COMMUNITIES TO DEVELOP INDICATORS FOR IMPROVED RANGELAND MANAGEMENT

[The Desert Margins Program \(2009\) developed:](#) Land User's Monitoring Field Guide for Improved Management Decisions – a simple and practical approach.

- Focuses on rangeland productivity at a very localised scale, measuring:
  - Rainfall
  - Land and vegetation: species composition, forage production, bush density
  - Soil: type, type of degradation, condition
  - Livestock condition
- Provides a practitioner-oriented approach.

# MONITORING RANGELAND HEALTH

- **Riginos and Herrick (2010):** Simple 10 step guide to monitoring rangeland management, developed in Eastern Africa, aimed at improving the rigor of local monitoring.
  1. Complete an inventory and assessment of the land
  2. Define management objectives
  3. Define monitoring objectives
  4. Decide what to monitor
  5. Decide where to monitor
  6. Decide when and how often to monitor
  7. Document the specific monitoring plan
  8. Collect the data
  9. Analyse and interpret the results
  10. Learn from and act on the results
  
- This approach combined with participatory approaches could provide more robust models:





# USING INDIGENOUS KNOWLEDGE IN RANGELAND ASSESSMENTS

## Harnessing pastoralists indigenous range management knowledge for drought-resilient livelihood systems in the horn of Africa (Oba, 2009)

- 3 countries among the Orma in Kenya, Afar in Ethiopia, and Karamojong in Uganda.
- Highlights the importance of participatory research whereby ecologists and policy makers utilize local (herder) indigenous knowledge for assessments, monitoring and **decision-making** in rangeland management.

# IUCN COMMUNITY LED ASSESSMENTS IN KARAMOJA , UGANDA and GARBA TULA KENYA

## Key steps in Community-Led Rangelands Assessment

### Step 1:

Participatory Planning with Critical Stakeholders

### Step 2:

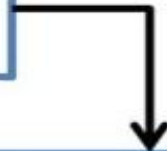
Ground-truthing

### Step 3:

Feedback Session with Critical Stakeholders

### Step 4:

Compilation of Assessment Report and presentation at Multi-stakeholder Forum





# NATIONAL ASSESSMENTS

- IUCN starting to conduct national level assessments in Kenya, Burkina Faso and Jordan.
- Most countries have district level monitoring and assessments, but what are data access protocols?
- Commonly use remote sensing and Normalised Difference Vegetation Index (NDVI).
- Triangulating monitoring data from local to regional to national level.
- Establishing a multi-stakeholder process to strengthen sustainability for monitoring systems and buy-in for assessments.

# USING MONITORING TO INFLUENCE POLICY AND REINFORCE NATIONAL COMMITMENTS TO INTERNATIONAL POLICY

- In Jordan scaling up of IUCN rangeland SLM work led to demands for rangeland monitoring
- Rangeland monitoring dialogue led to IUCN revising Jordan 2006 NAP in December 2014
- NAP is aligned with the UNCCD 10 yr strategy, which is in turn aligned with other Rio conventions (cross-convention synergies).
- This provides a way to link rangeland monitoring directly into national prioritisation exercises, reporting on international commitments etc.
- For data derived from monitoring to be useful it has to be in the public domain.
- **Land Degradation has to be everybody's responsibility and therefore monitoring systems must be a public service**



# Thank you

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