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PRAGA for LDN and Sustainable Rangeland Management Good Practices

Bora Masumbuko
Senior Programme Officer, IUCN

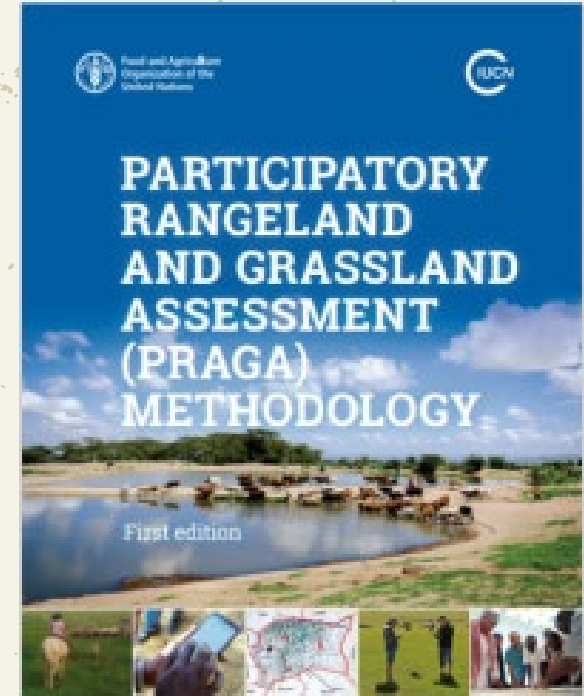


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Sustainable Forest Management Impact Program on
DRYLAND SUSTAINABLE LANDSCAPES

Why the PRAGA methodology?

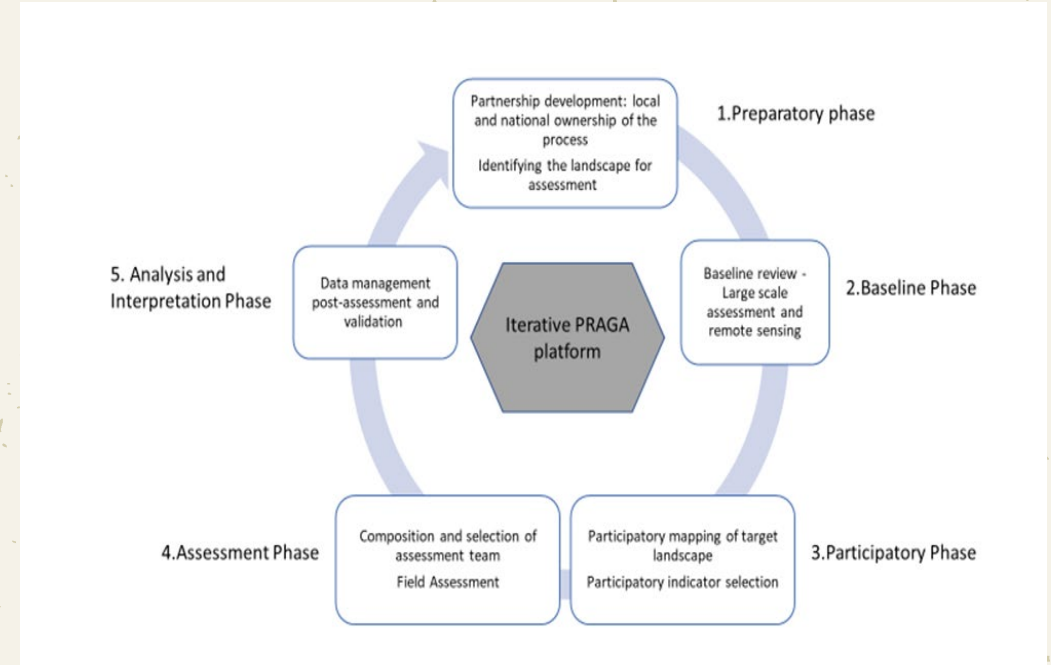
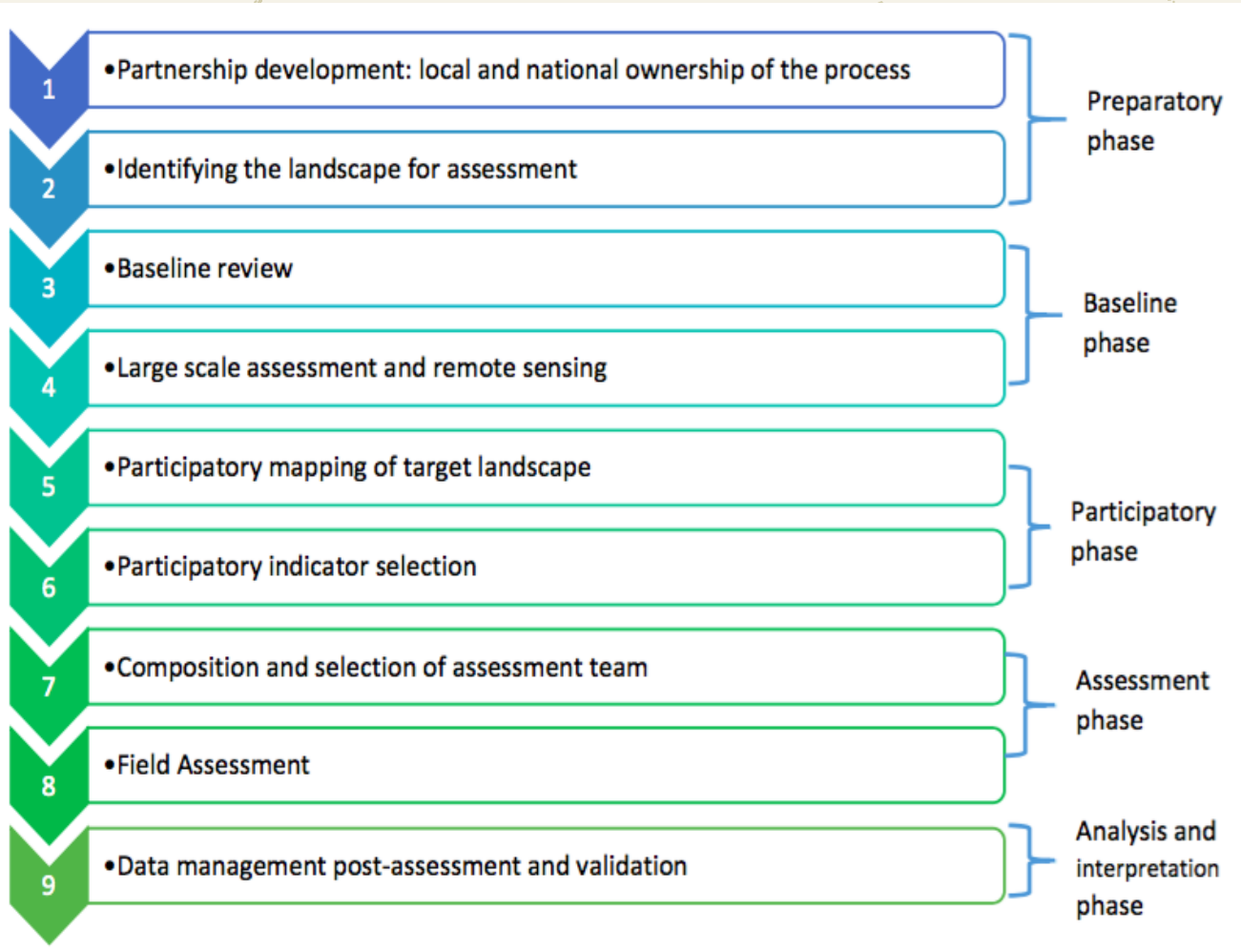
- To respond to grasslands and rangelands' assessment gaps
- To strengthen the capacity of local and national stakeholders to assess land degradation
- To build evidence to support sustainable management
- **Aim:**
- **Inform decision-making** by rangeland stakeholders, **guide collaborative actions** between local government and pastoral communities
 - *Important to assess rangeland health according to the management objectives of local land users*
- **Identify trends** in rangeland health in order to guide management planning, e.g. prioritizing areas for restoration
- **Inform public planning** as well as collective action by pastoralists
 - *Combine locally determined indicators with standardized indicators that governments can use to compare rangeland health among sites*



Guiding principles

- **Multi-functionality:** homogeneous and highly heterogeneous landscapes
- **Cost-effectiveness:** assessments will be supported by a limited number of core, representative indicators of rangeland health (less volume of data and analysis required)
- **Participation** – to reduce costs of data collection and analysis and to strike balance between locally-determined and globally comparable indicators

Brief outline of the PRAGA methodology



Step 1: partnership development

- The aim is to **engage key stakeholders**
 - Because through dialogue at the national, landscape and local levels is key to define target areas for assessment and relevant stakeholders.
- **National inception meetings:** identification of previous grassland assessments and related initiatives, policy processes, agree on management objectives, preliminary identification of stakeholders and roles and responsibilities
- **Local inception meetings:** preliminary visits to the field, identify local data and past assessments, identify local stakeholders, etc

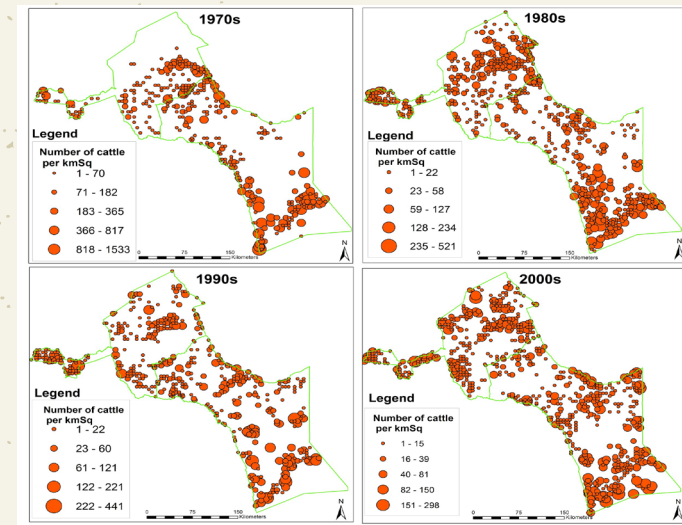
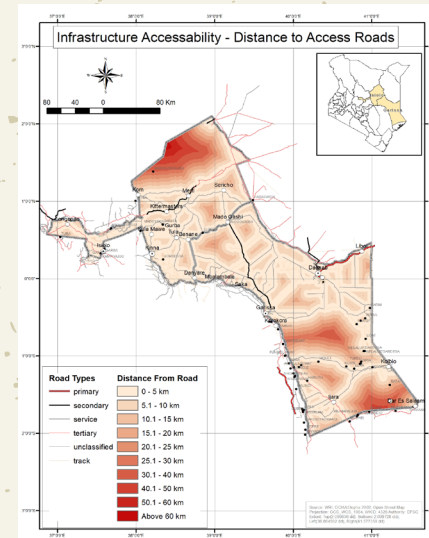
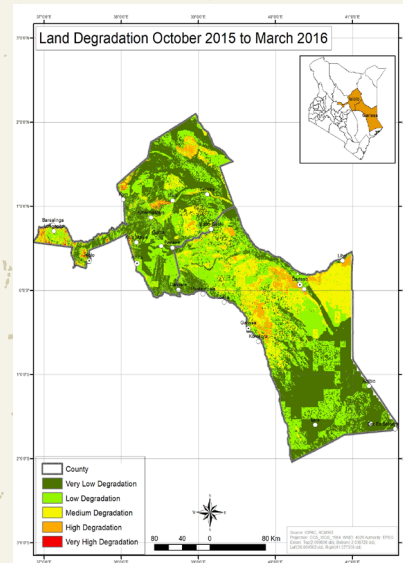
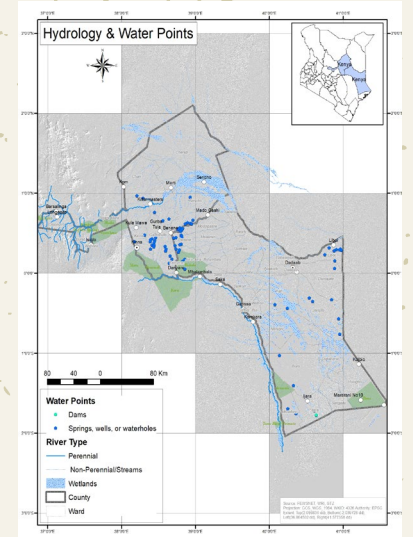
Step 2: Identifying the landscape for assessment

- **Aim:** Agree on an area for assessment that is of the appropriate geographic or administrative scale, where ecosystems and land use can practically be determined, and take other relevant questions into consideration for application of the methodology
- Prioritization of a landscape: importance for grazing, accessibility, security, previous experience/contacts, organized herder/producer groups, heterogeneity, review of landscape level data
- Other elements to consider: scale, ecosystem and land use, access and consent, timing of assessment

Step 3: Baseline review

Aim: compile available data from secondary sources and local informants to provide the context of the assessment

- Context and background info: climate, topography, political and social context, etc
- Environment data: agro climatic zones, PET, NDVI, NPP, land cover change, rainfall, biodiversity assessment
- Socio economic data: HDI, poverty, infrastructure, human population, etc
- Stakeholder analysis
- Policy environment: institutional mechanisms, SLM practices, institutions involved in managing land



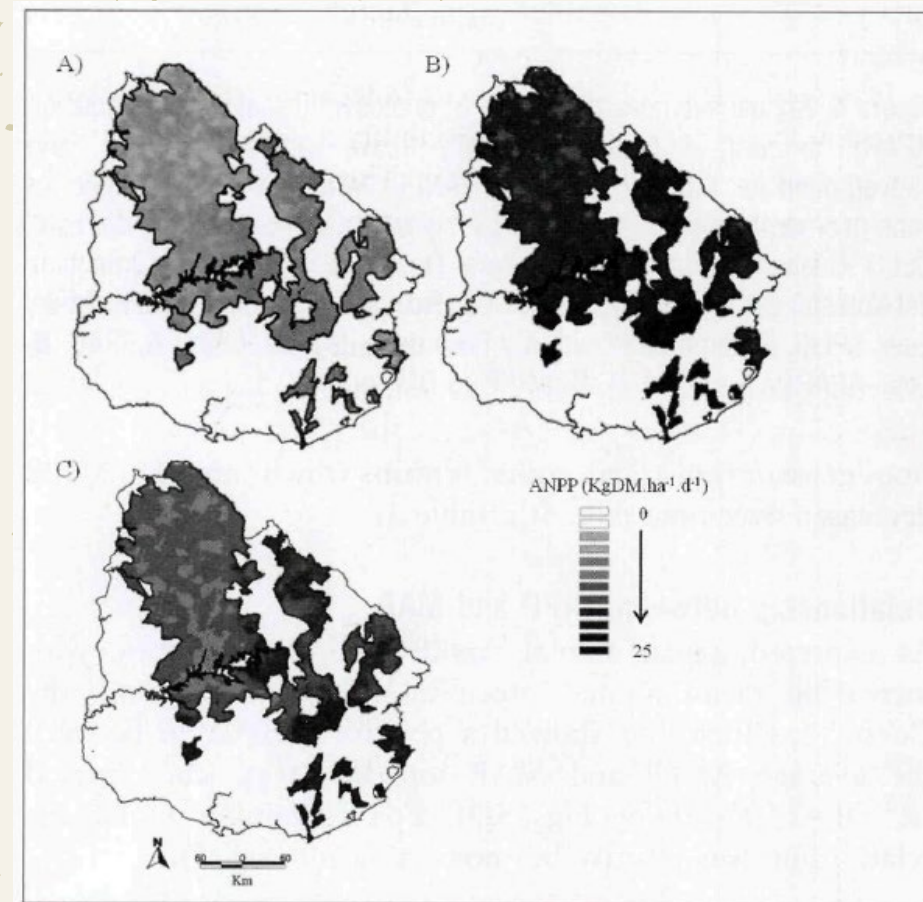
	1970s	1980s	1990s	2000s
Garissa	561,820	313,129	253,553	239,905
Isiolo	223,797	184,823	113,995	146,894

Step 4: large scale assessment & remote sensing

Aim: Provide a large-scale overview of the target landscape to inform the selection of field validation sites

- **using existing datasets** to provide a rapid overview of the state and trends of specific indicators of LD or grassland/rangeland health.
- data can include topographic maps, climate data, and indicators of land productivity
- may require to verify info on the ground to calibrate or validate large scale assessment and helps to improve the interpretation and analysis of landscape condition and health
- guided in the first instance by the availability of data and expertise in each country

Remote sensing: Images collected from satellites are transformed into maps that show features and changes



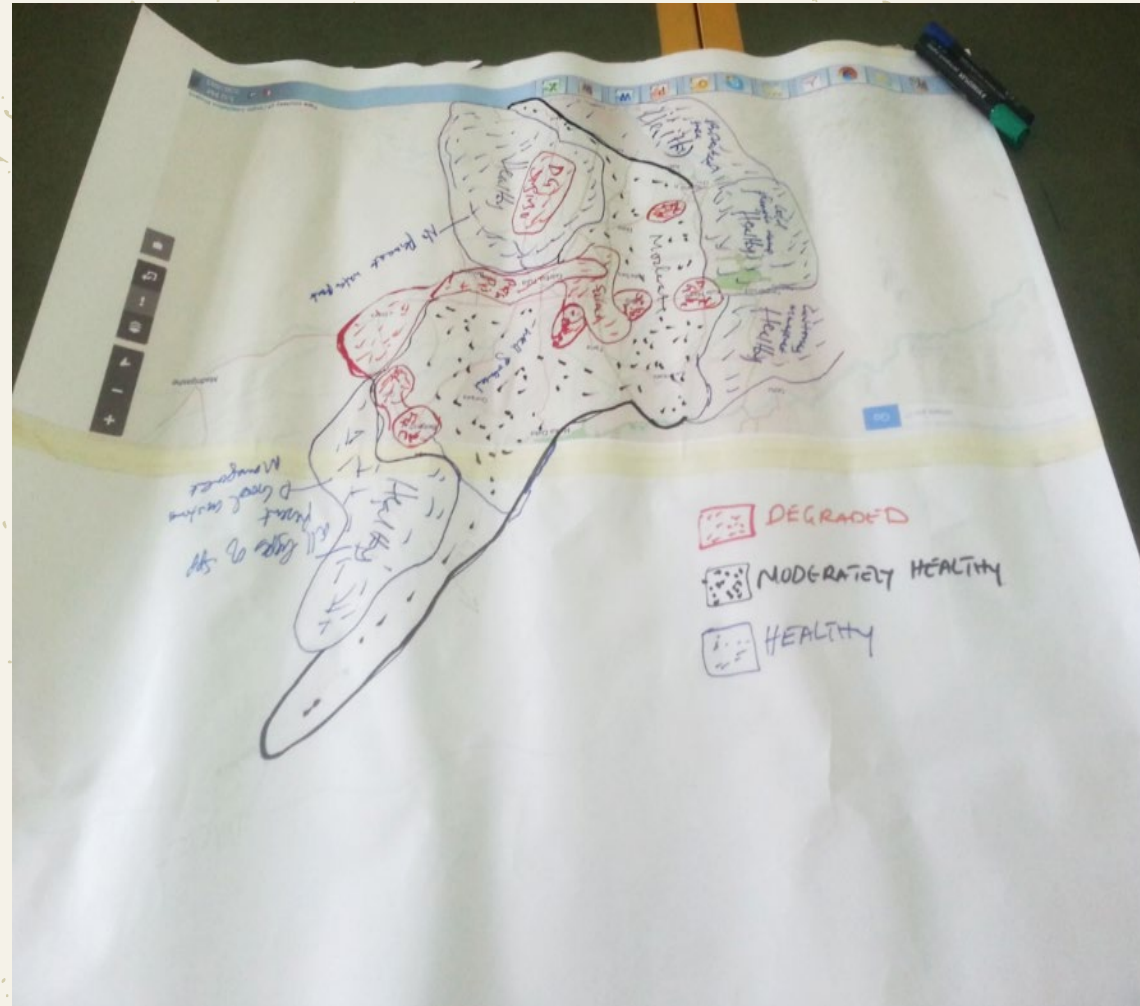
Source: Guido *et al.*, 2014

Step 5: participatory mapping of target landscape

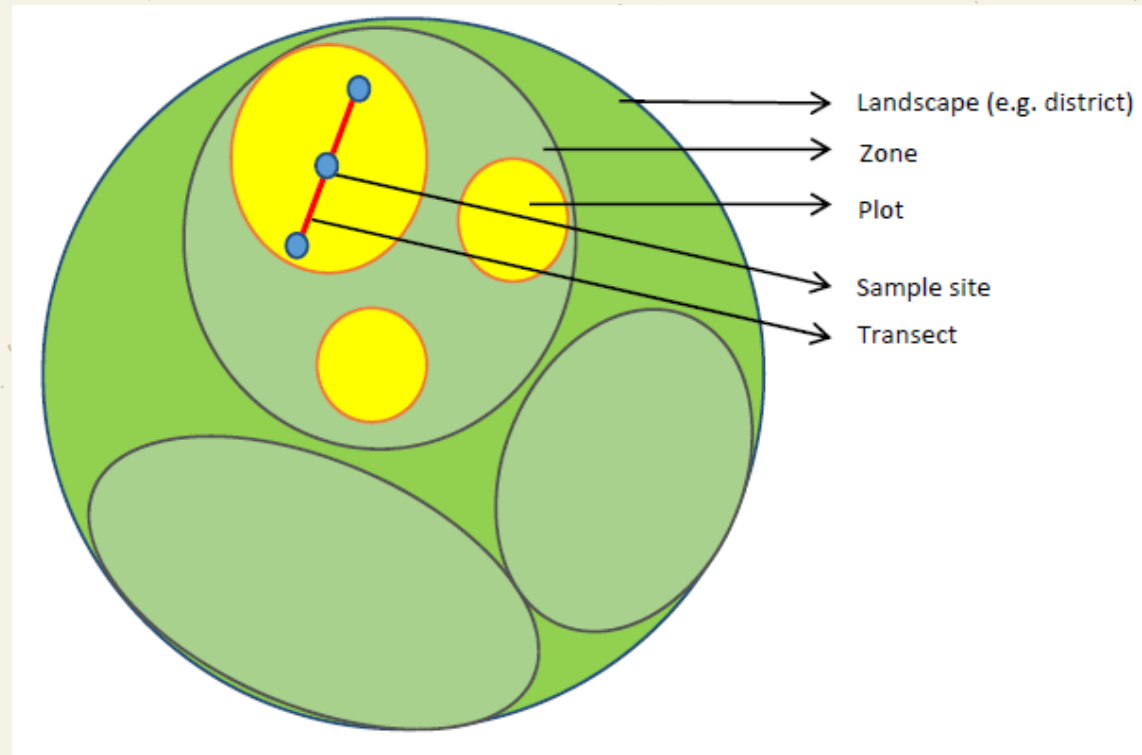
Aim: local stakeholders map the target landscape to identify **distinct zones for assessment** through a participatory process

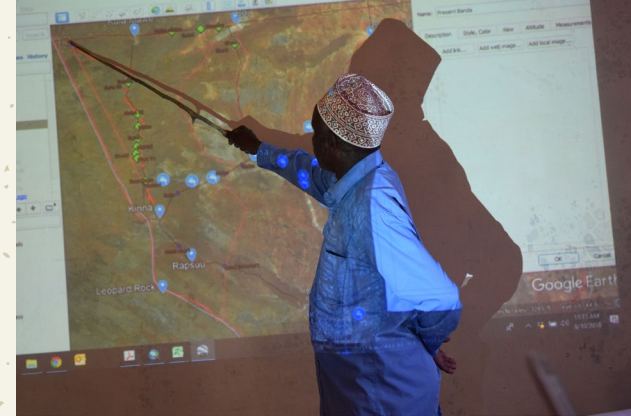
- Understand and visualize:
 - Rangeland priority resources
 - Different land uses
 - State of the resources (degraded, non degraded, etc)
 - Any issues related to resource uses

Interpretation of the land **through the eyes of the land users**: degraded or not degraded?



The participatory mapping exercise is carried out to **classify the landscape into sub-areas for further assessment:**
landscape; zone; plots; transects





Step 6: Participatory indicator selection

Aim: Participants in the mapping workshop agree on adequate and feasible number of indicators for field assessment of rangeland status

- Participants should identify an **adequate** set of indicators
 - provide a thorough assessment of rangeland status
 - are accepted by the stakeholders: indicators that are **informed by local knowledge and local management objectives and also scientifically robust**
- Since we want indicators to be **widely adopted**: costs and time of acquisition should be limited (cost of data collection and data analysis)
- Strongly adapt indicators to the **local needs**
- Different indicators are chosen or different indicators are assessed differently.
 - a catalogue of indicators is provided for selection either at the national or community level
 - the indicators are identified in a collaborative manner before it is included in the catalogue

Framework of indicators

3 domains of biophysical indicators are identified. They are considered essential for a **robust assessment of rangeland health**

Indicator Domain	Description
Soil	<ul style="list-style-type: none">• Physical degradation processes (soil surface loss, bare ground, wind and water erosion)• Biological/chemical soil changes, including soil organic carbon
Hydrology	<ul style="list-style-type: none">• Total water retained in the system (e.g. aquifers, soil moisture and proxies such as well depth, recharge rates, time required to water stock etc.)• Water quality e.g. turbidity, salinity, chemical content etc.
Biota	<ul style="list-style-type: none">• Total vegetation (e.g. biomass, proportion of vegetation cover, Net Primary Productivity)• Type of vegetation (e.g. species richness, palatable species, high value species, and invasive plants etc.)

Step 7: Composition and selection of assessment team

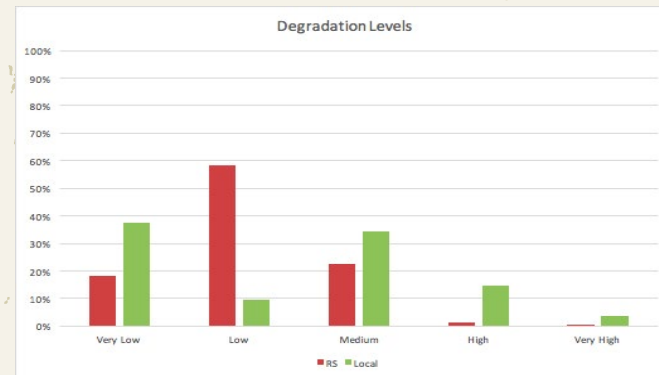
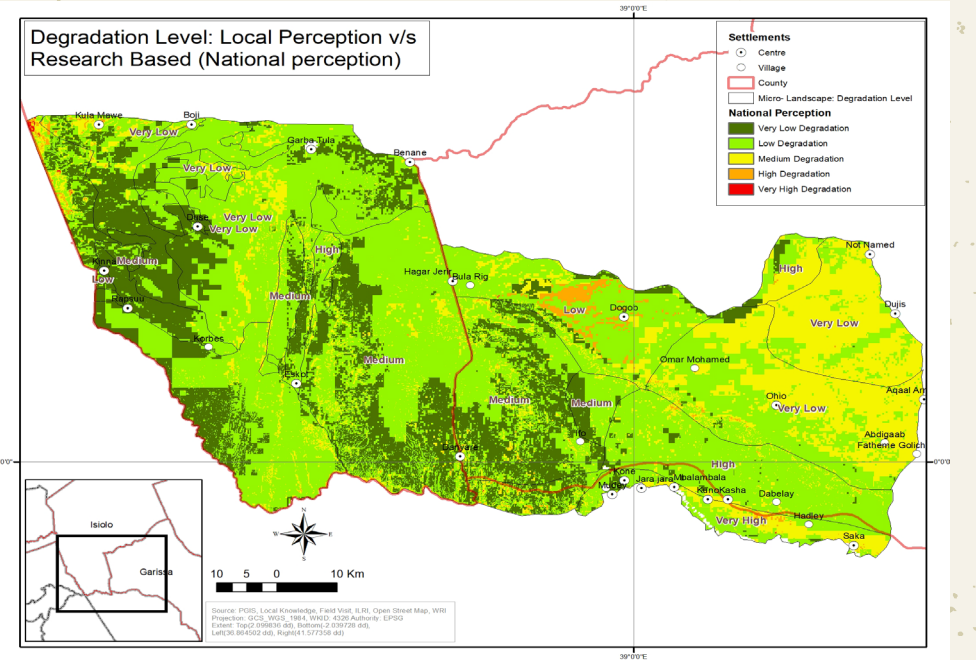
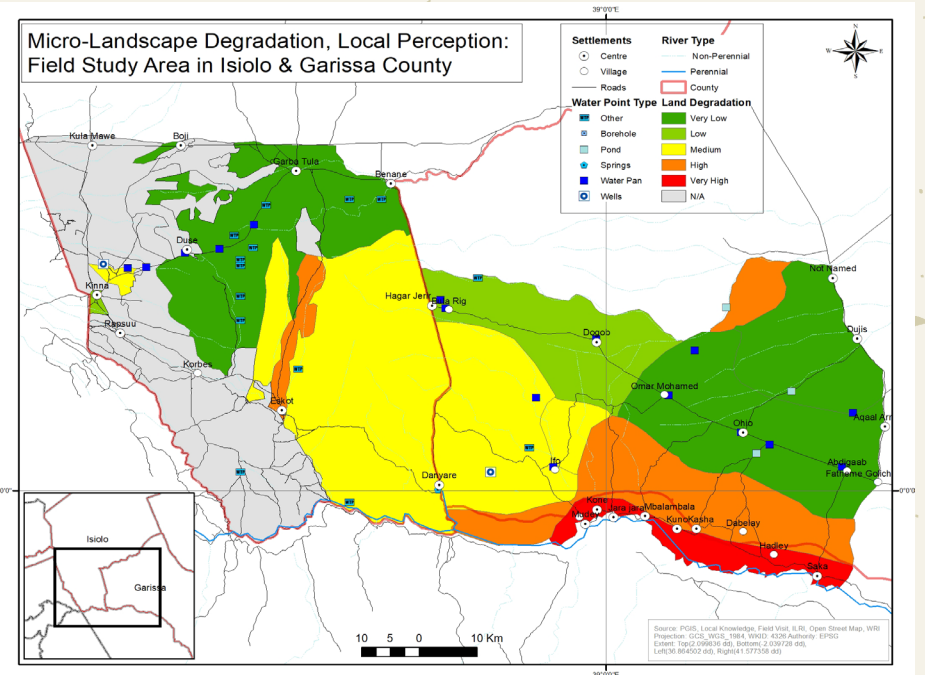
Aim: Establish an assessment team that combines the necessary skills and representation

- **Size** of assessment team: vary with resource available for assessment - logistical costs, access to vehicles and the scale of the landscape under assessment
- **Essential skill combination:** balance of community and non-community rangeland experts, scientific experts, including, botanist and ecologists, community experts based on recognized expertise and knowledge
- **Representation:** balanced representation of stakeholder groups (community leader, government stakeholders, etc.
- **Training** of assessment team

Step 8: Field assessment

Aim: Measure the agreed indicators in all the identified zones, plots or transects

- Review maps created during participatory mapping to agree on most suitable maps
- Field work
 - Agreeing on transect
 - Take representative plots
- Rapid validation of selected indicators
 - ½ day testing of indicators and data sheet
- Specific tools for key indicators



Step 9: Data management, post-assessment and validation

Aim: Ensure all data is systematically stored, analysed, and easily retrievable, and the assessment reports are improved and endorsed by key stakeholders, including local communities.

- Data gathering and storage
 - data sheets are photocopied/scanned to ensure backups before completion of the assessment
 - central data established under PRAGA project
 - data storage and access to be agreed during country inception processes
- Data analysis using DPSIR framework
- Establish structure of assessment report
- Validation workshops – local and national

Conclusion

- The PRAGA methodology is a **dynamic document** that can be updated as we learn new lessons from testing the methodology
- **Participation is essential**
- **Local knowledge and scientific knowledge can complement each other.** The role of local knowledge is also critical in informing indicator selection and carrying out the assessment
- The tool should be mainstreamed in national monitoring systems/policy settings as a tool that can inform actions (including LDN related) and decisions

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THANK YOU!

Thank you