

# Replacing the Rangeland Marginalization Narrative with One of Planetary Value

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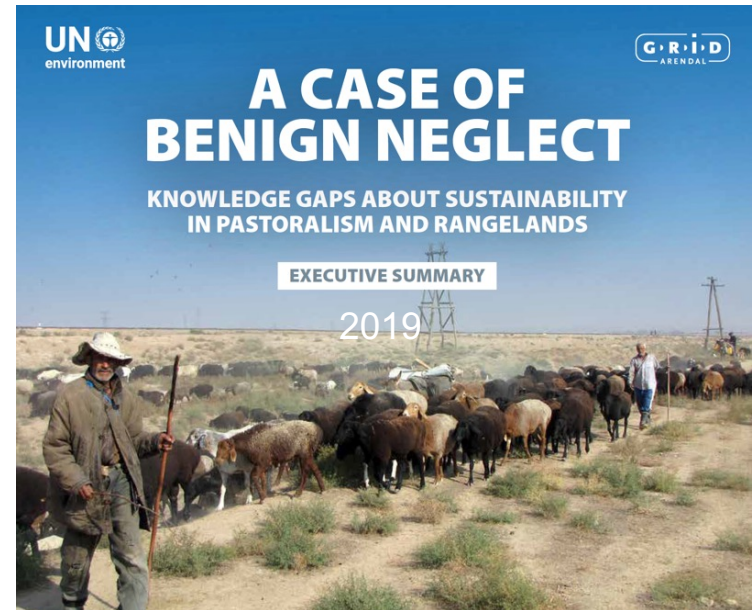


# Rangeland Marginalization Confirmed

UN sanctioned report ‘**A Case of Benign Neglect**’ confirms the marginalization or devaluation of global rangelands.

## Insufficient information to:

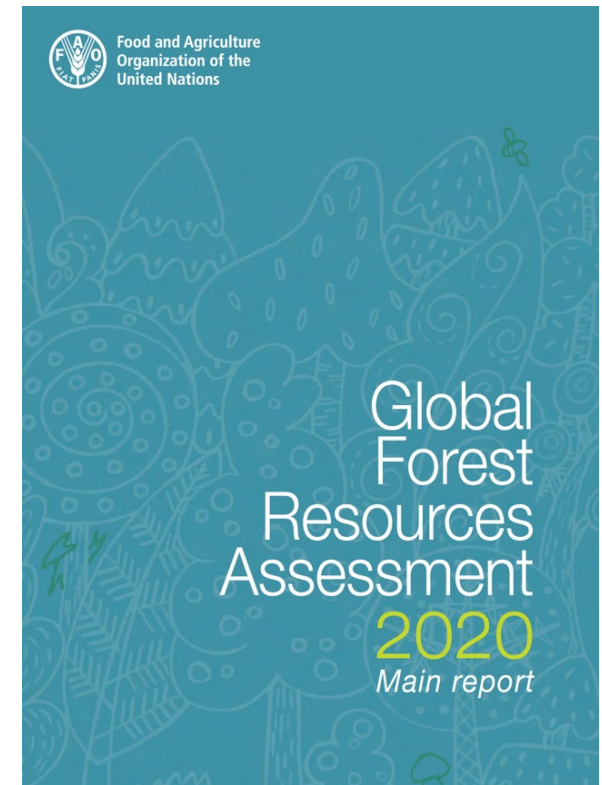
- Define scope and extent
- Determine current status
- Future stewardship needs
- Implement required action



# Forest vs. Rangeland Value?

## Food and Agriculture Organization

- Global Forest Reassessment – 2020
- Referenced to a 1990 baseline
- Multiple metrics of national and global forests provided
- Comparable rangelands assessment does not exist
- Rangeland Atlas (2021) is an important first step



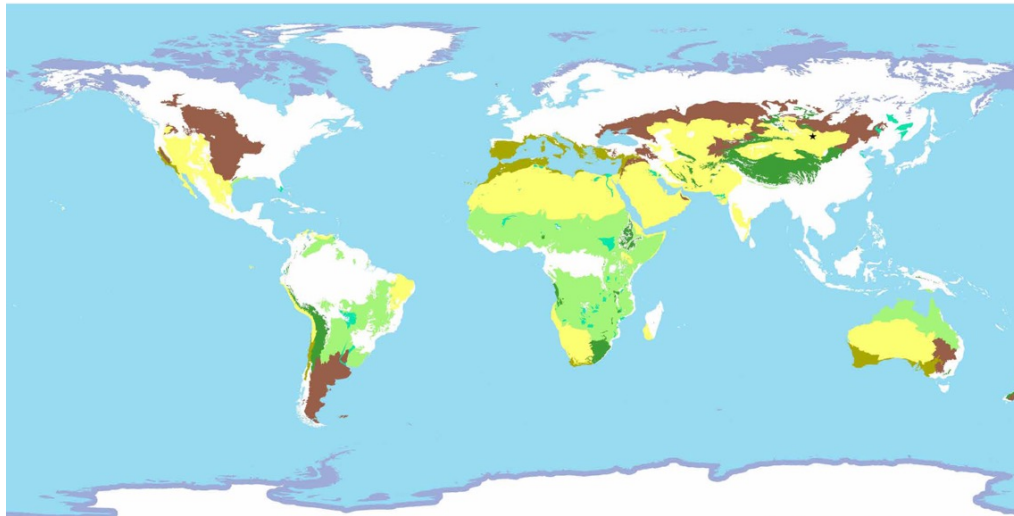
# Costs of Marginalization Narrative

- Biodiversity and associated ecosystem services become externalities in land use change.
- They are unrecognized or undervalued relative to a few select provisioning services.
  - ✓ Wildlife loss in response to private land tenure
  - ✓ Loss of key resource areas to agriculture
- Creates opportunities for land acquisition (grabs) by powerful national or international actors.
  - ✓ Often for purposes of resource exploitation
  - ✓ Indigenous peoples often disadvantaged

# Critical to Planetary Stewardship

## Global Rangelands

## Rangeland Value



No	Rangeland types	Area km <sup>2</sup>
1	Deserts and xeric shrublands	27,984,644.64
2	Flooded grasslands and savannas	1,096,329.62
3	Mediterranean forests, woodlands, and scrub	3,297,248.38
4	Montane grasslands and shrublands	5,203,451.00
5	Temperate grasslands, savannas, and shrublands	10,504,079.63
6	Tropical and subtropical grasslands, savannas, and shrublands	20,295,434.79
7	Tundra	11,586,465.28
	<b>Total</b>	<b>79,509,620.64</b>



Source 1: Terrestrial ecoregions of the world. Downloaded in 2021 from:  
<https://global-panels.appspot.com/datasets/terrestrial-ecoregions/geometry?lat=12.26&lon=88.899&size=266%2C266>  
 Original source: Olson, D. R., Sorensten, E., Wikramanake, E. D., Burgess, N. D., Powell, G. V. R., Underwood, E. C., D'Ambrosio, J. A., Rosi, I., Strand, H. E., Morrison, J. C., Loucks, C. J., Altmann, T. F., Ricketts, T. H., Kura, T., Lamoreux, J. F., Wettengel, W. W., Hedao, P., Kassem, K. R. (2001). Terrestrial ecoregions of the world: a new map of life on Earth. *BioScience* 51(11): 933-936.

54% total land area  
 30% terrestrial C pool  
 Biodiversity hot spots  
 Charismatic mammals  
 Cultural Heritage Sites  
 Diverse pastoral societies

(Millennium Assessment 2005,  
 Rangeland Atlas 2021)

# Origin Marginalization Narrative

- Origin traced to **European scholars** that interpreted rangelands as a consequence of forest degradation by indigenous pastoralists, rather than climatic conditions mid-19<sup>th</sup> century.
- Narrative spread throughout global during colonial period.



## The Arid Lands

History, Power, Knowledge

Diana K. Davis

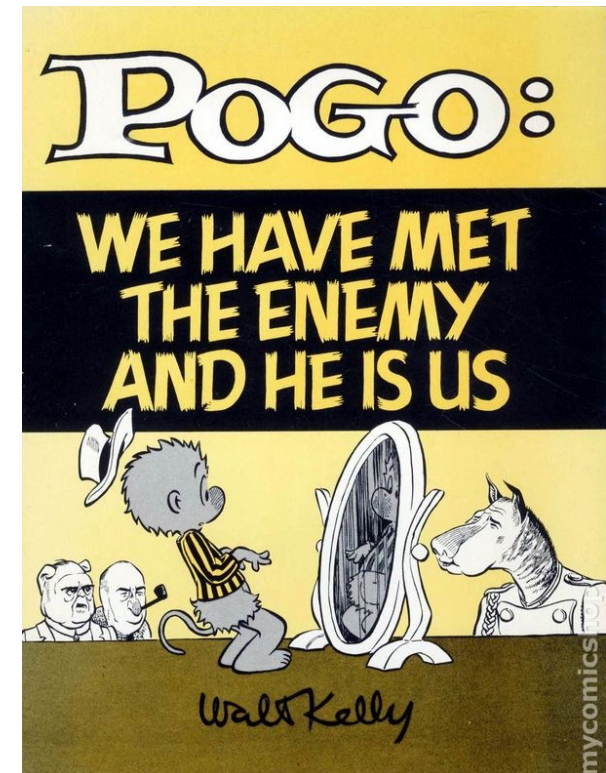
(Diana Davis 2016)



# Narrative Perpetuation

**Narrative deeply embedded within the global rangeland community**

- Restrictive rangeland definitions
- Misunderstanding of pastoralism
- Rangeland development programs
- Rangeland omission from structure of intergovernmental organizations
  - ✓ Agriculture
  - ✓ Forestry
  - ✓ Livestock



# Power of Narratives

## Narratives represent the default mode of human thought

- Approximations of how humans interact with nature; their legitimacy is based on the *appearance* of truth.
- Provides meaning to real-world events *without specific* argument or evidence.
- Narratives are very *difficult* to counter with facts and evidence.

(Dahlstrom 2014; Downs 2014)





# Historical Chronicle

## Historical chronical of the Dust Bowl

- Immigrants encouraged to settle Great Plains (1862-1909)
- Agriculture flourished throughout the 1920s
- Severe drought produced human exodus (1930s)
- Re-populated with government support (1940s-)



(Cronon 1992)

# Dust Bowl Narrative

Drought on the Plains was a formidable antagonists to the advance of civilization, but perseverance and ingenuity ensured human triumph.

- Narrative provides the *plot* for a compelling interpretation of events
- Human centered
- Inconsistencies discounted

(Cronon 1992)



# Why Emphasize Narratives?

## *Traditional Approach Insufficient*



### **Information**

Formal Classes  
Adult Education  
Web Content  
Print Content  
Video Material

# Attitudes Not Always Logical

Attitudes – disposition toward a topic or issue.

- Belief is object specific without emotion
- Affect is an irrational (emotional) component

Affect is stronger than belief so *evidence* alone does *not* change attitude.

Affect strongest when based on *identity* and *experience*.

**Narratives may be a solution.**



Navigating  
Environmental  
Attitudes

THOMAS A. HEBERLEIN 2012

# Powerful Counter Narrative Required

**"Only way to counter a negative narrative is with a positive narrative" – B.T. Bestelmeyer**

- Counter narrative to 'balance of nature' has developed within ecology the past 5 decades
  - ✓ Non-equilibrium is now widely referenced
- 'Good Anthropocene' developed to counter narrative of a dystopian future.
  - ✓ Seeds of Good Anthropocene initiative (Bennett 2016).

# Got Counter Narratives?!?!

- Rangeland definition
  - ✓ **More encompassing**
- Diverse pastoral societies
  - ✓ **Rich cultural diversity**
- Ecosystem services value
  - ✓ **Biodiversity most critical**
- Planetary scale essential
  - ✓ **Biosphere in the balance**





# Potential Counter Narrative

## Traditional rangeland definitions

- Uncultivated land that provides the necessities of life for grazing and browsing animals (Holechek et al. 2011).
- An area where wild and domestic animals graze or browse on uncultivated vegetation (FAO 2000).

## More inclusive rangeland definition

- Human dominated ecosystems supporting native or naturalized vegetation .... managed as complex adaptive systems to provision multiple ecosystem services to benefit human well-being (Briske 2017).

# Pastoral History and Diversity

## *Pastoral Origins*

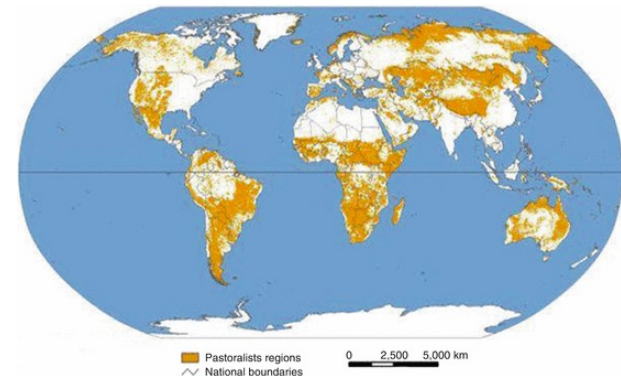
- 10,000 YA, Holocene warming, Africa
- Auroch domestication (*Bos primigenius*)

## *Pastoral numbers (?)*

- 200-500M pastoralists
- 30-40M nomadic pastoralists

## *Diversity*

- 50 major pastoral societies exist



# Rangeland Ecosystem Services

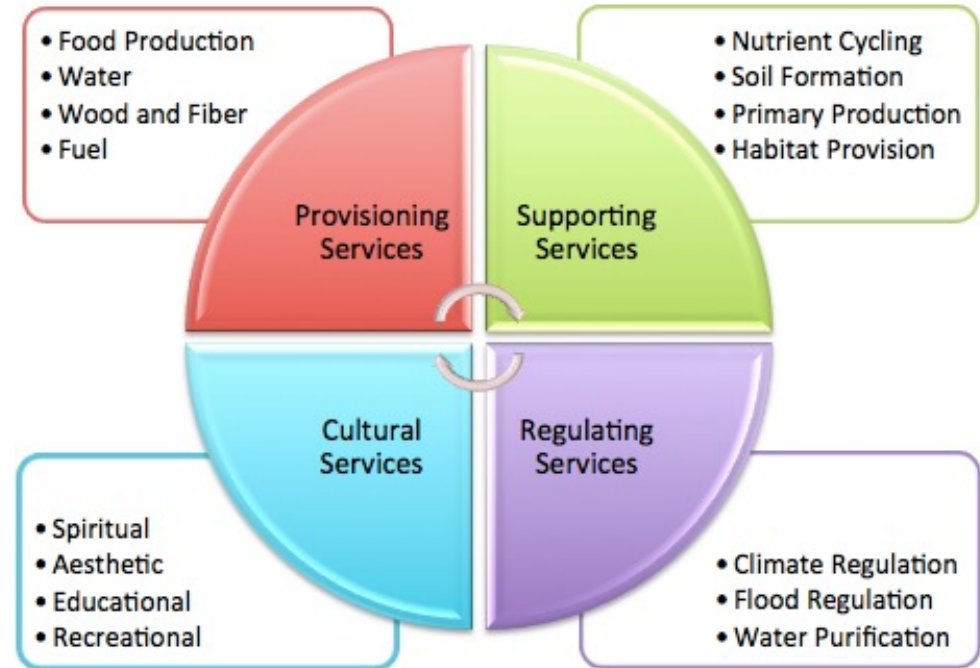
## Ecosystem Services

*Provisioning*

*Supporting*

*Regulating*

*Cultural*

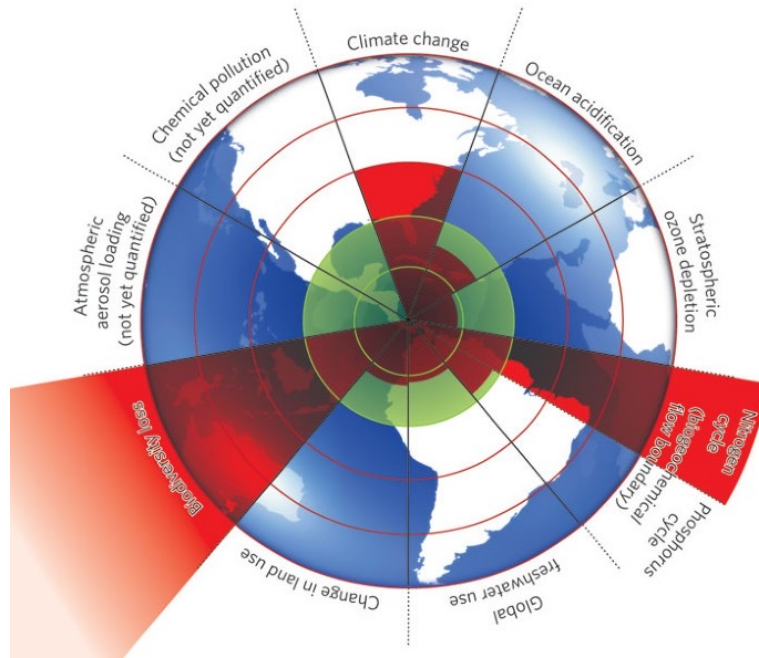


Source: Millenium Ecosystem Assessment, 2005.



# Rangelands: Biodiversity Repository

## Safe Operating Space



Rockstrom et al. 2009

**Total land area of Earth**  
35% ecologically intact  
14% area protected  
**Rangelands 54% land area**  
12% protected  
30% biodiversity hotspots

Kuempel et al. 2020  
Rangeland Atlas 2021

# Example Narratives

- *Marginalization narrative:* Global rangelands were initially forested, but indigenous peoples degraded them, contributing to extensive rangelands characterized by resource scarcity and variability.
- *Counter narrative:* Rapid biodiversity loss imperils planetary function, but the vast biodiversity of expansive rangelands can maintain a safe operating space for humanity.



# Counter Narrative Critical

**Power of a counter narrative** emphasizing global rangeland value to planetary stewardship cannot be overemphasized.

- Transform intergovernmental organizations
- Justify societal support of rangeland biodiversity
- Empower pastoralists with greater self-governance

**Signature contribution of the IYRP** that may have far reaching consequences.



INTERNATIONAL  
YEAR OF  
RANGELANDS AND  
PASTORALISTS