

Pastoralists in the 21st century:

“lo-tech”
meets
“hi-tech”



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INTERNATIONAL RANGELAND CONGRESS

18 - 22 July 2016, TCU Place, Saskatoon, Canada

Pastoralists



Photo: Wolfgang Bayer

... using grazing animals to produce food in marginal areas

... capitalising on unpredictable heterogeneity of natural resources over space and time

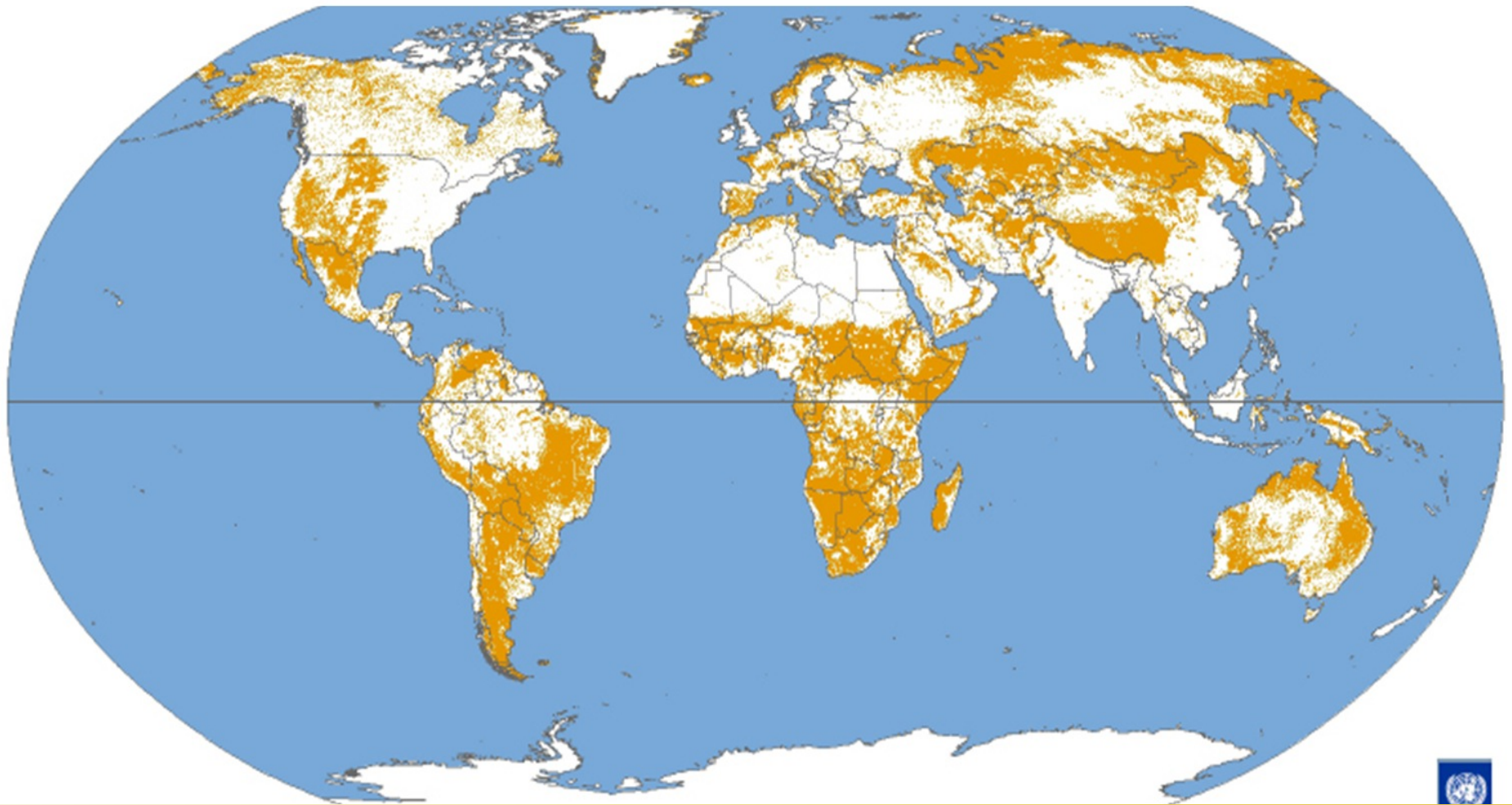
... practising knowledge- and labour-intensive production with little mechanisation

in a hi-tech world ...

... ICT, mobile phones, biotechnology, electronics, satellites, alternative energy, remotely controlled vehicles etc



Photo: Don McCullough



Pastoralist regions in the world

(Source: World Initiative for Sustainable Pastoralism / WISP)

Some impacts of external hi-tech on pastoralism

1) Industrialised production marginalises local pastoral products



Photos: Wolfgang Bayer



2) Hi-tech food-safety control excludes poorer pastoralists from market

Some impacts of external hi-tech on pastoralism

3) Technological development leads to competing uses of land



Photo: GIZ



Photo: Wolfgang Bayer



Photo: Wolfgang Bayer

Some impacts of hi-tech
within pastoral systems:

1) Communication

Mobile phones

+

Mobile money

+

Mobile energy

=

Upsurge of enterprise
among pastoralists,
esp. youth & women



Photo: ActionAid



Photo: Georges Djohy



Photo: ActionAid

Some impacts of hi-tech within pastoral systems:

2) Motorised transport

- **Inexpensive motorbikes**
 - more efficient herd control
 - facilitating movement of camps
 - facilitating marketing of products
- **Trucking feed, water & stock**
 - access to more lucrative markets
 - survival feeding/watering
 - better use of dispersed and ephemeral grazing resources
- **Drones**
 - reduced costs of mustering/rounding-up
 - better control of fences & waterpoints



Photo: Georges Djohy



Photo: Wolfgang Bayer



Photo: Don McCullough

Some impacts of hi-tech within pastoral systems:

3) Animal healthcare



- Technological advances in vet drugs & vaccines
 - allows community-based animal health services in remote areas
 - but danger of inappropriate use of drugs / increase in drug resistance
- Monitoring health by mobile phone
 - human & animal health (One Health)
- Both supported by mobile decentralised energy generation



Some impacts of hi-tech within pastoral systems:

4) Computer-based market info

- Mainly used by project & government staff to track trade and plan interventions
- Supported by donors
- Probably not self-sustainable in pastoral areas



Photo: Helvetas Swiss Intercooperation

Photo: IFAD

Some impacts of hi-tech within pastoral systems:

5) Satellite-based info systems on pastoral resources

- Combination of cellphones & satellite imagery
- Monitoring conditions of pastoral resources
- Pastoralist decision-making tool for herd movements
- Facilitating policy dialogue and pastoralists' influence in planning

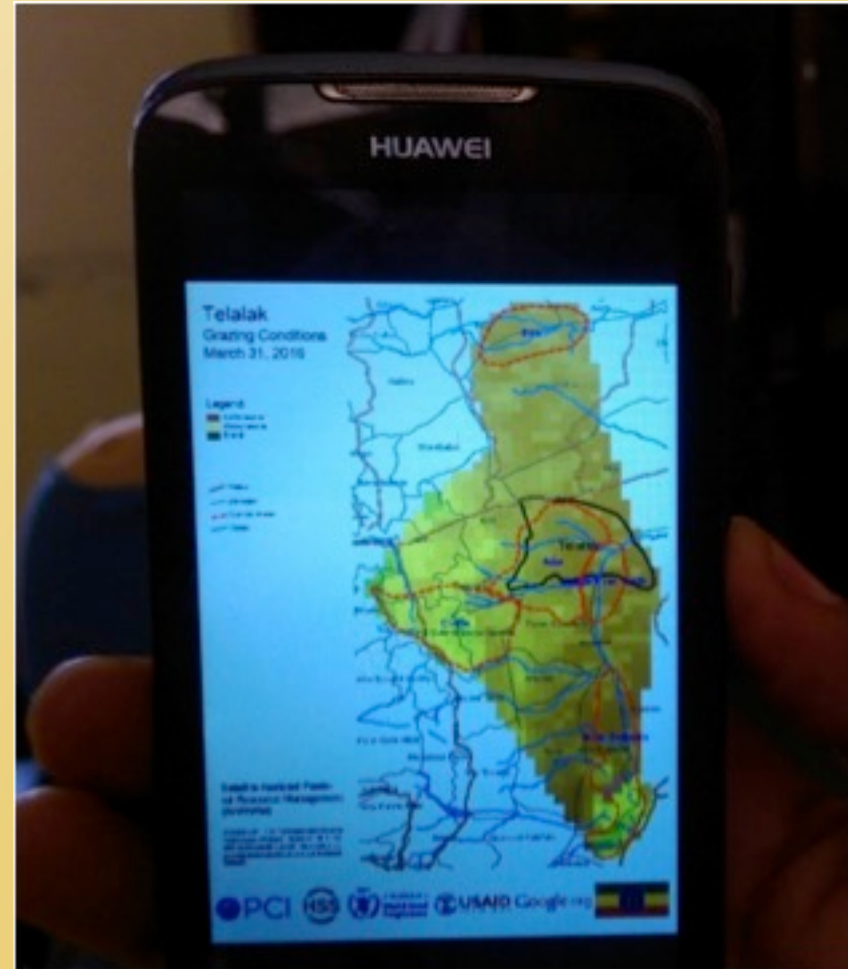


Photo: Project Concern International

Some impacts of hi-tech within pastoral systems:

6) Index-based livestock insurance (IBLI)

- Based on remote-sensed data on vegetative cover
- Meant to reduce risk of livestock losses with weather extremes
- Testing phase – uncertain whether commercially viable



Photo: ACTED



Photo: Neil Palmer / CIAT

Some impacts of hi-tech within pastoral systems:

7) Digital identification of stock

Microchips, e.g. in rumen bolus, or digital eartags

- help reduce livestock theft
- trace provenance of stock
- allow external monitoring of stock holdings & movements
- create dependence on infrastructure & specialists



Some impacts of hi-tech within pastoral systems:

8) Modern hi-power weapons



Photo: Siegfried Modola

- Exacerbated conflicts
- Increased stock theft
- More human deaths
- No-go grazing areas
- Concentration of stock closer to settlements

Seeing potentials of hi-tech through a pastoral lens

*Mindset of Man controlling Nature doesn't fit pastoralist logic:
making strategic use of dispersed and ephemeral resources*

*Main management options that make economic sense in
most rangelands are lo-tech but hi-knowledge*

Intensifying this extensive production system → non-pastoral

Seeing potentials of hi-tech through pastoral lens – 2

Mobile pastoralists embrace mobile technologies



Photo: ActionAid



Photo: Leopold Obi

Beyond technology

- Pastoralist concerns linked to policy, economics, insecurity, resource access
- Hi-tech useful to support related negotiations



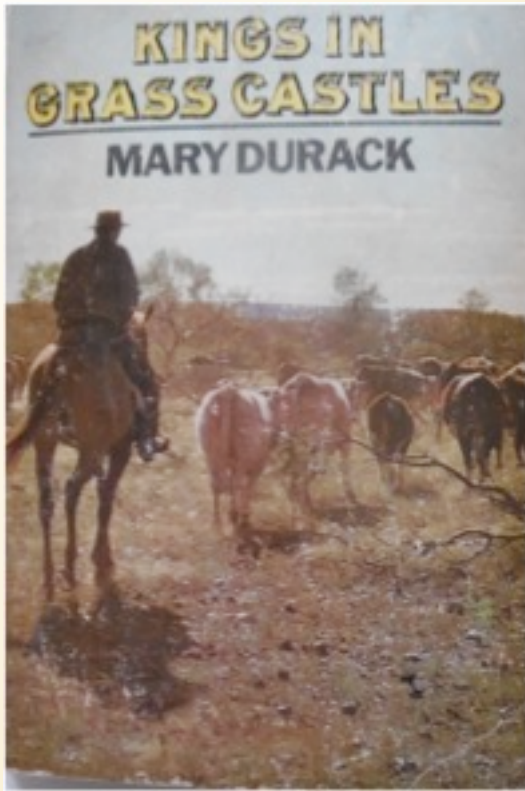
Photo: Georges Djohy



Local pastoralists at a climate change meeting with village authorities at Engang'Ungare village, in Kiteto district, Tanzania. Photo: IIED

- Going beyond “hard” technologies to explore institutional innovation

Photo: IIED



Beyond technology – amplifying pastoral voice

- Forming **coalitions** to lobby for pastoral concerns

- Strengthening pastoralists' capacity to use information to influence other stakeholders



Photo: James Pattison / IIED

Some international coalitions for pastoralism



Beyond technology – amplifying pastoral voice (2)



- Strengthening capacity of pastoralists to use ICT and media to lobby for pastoral concerns – in South & North



What might the future hold?

⚡ Misguided hi-tech “development” can oust pastoralists from rangelands pushing them into urban poverty, aid dependency or overseas migration



Photo: Standard Media Kenya

But more positive futures are also possible

- ✓ **Increased awareness of healthy & ecologically friendly organic food from the rangelands – market niche**
- ✓ **Greater appreciation of pastoralists' role in**
 - **food security**
 - **biodiversity conservation and**
 - **environmental services****combined with hi-tech options that fit mobile production systems**

Improved connectivity of remote pastoral areas



Photo: <http://acyig.americananthro.org/2016/01/10/2634>

More positive futures

Better infrastructure for ICT & transport innovations – and for pastoral life in general – could strengthen pastoralists' roles as citizens and productive users & stewards of the rangelands





Thanks for listening !



Photos: Wolfgang Bayer

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***Coalition of European Lobbies
for Eastern African Pastoralism***