Enhancing Resilience in the Horn of Africa

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Technical Consortium to Build Resilience to Drought in Horn of Africa

What is resilience?

- Walker *et al.* (2004), "the capacity to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity and feedbacks,"
- Cumming et al. (2005), "the ability of the system to maintain its identity in the face of internal change and external shocks and disturbances."

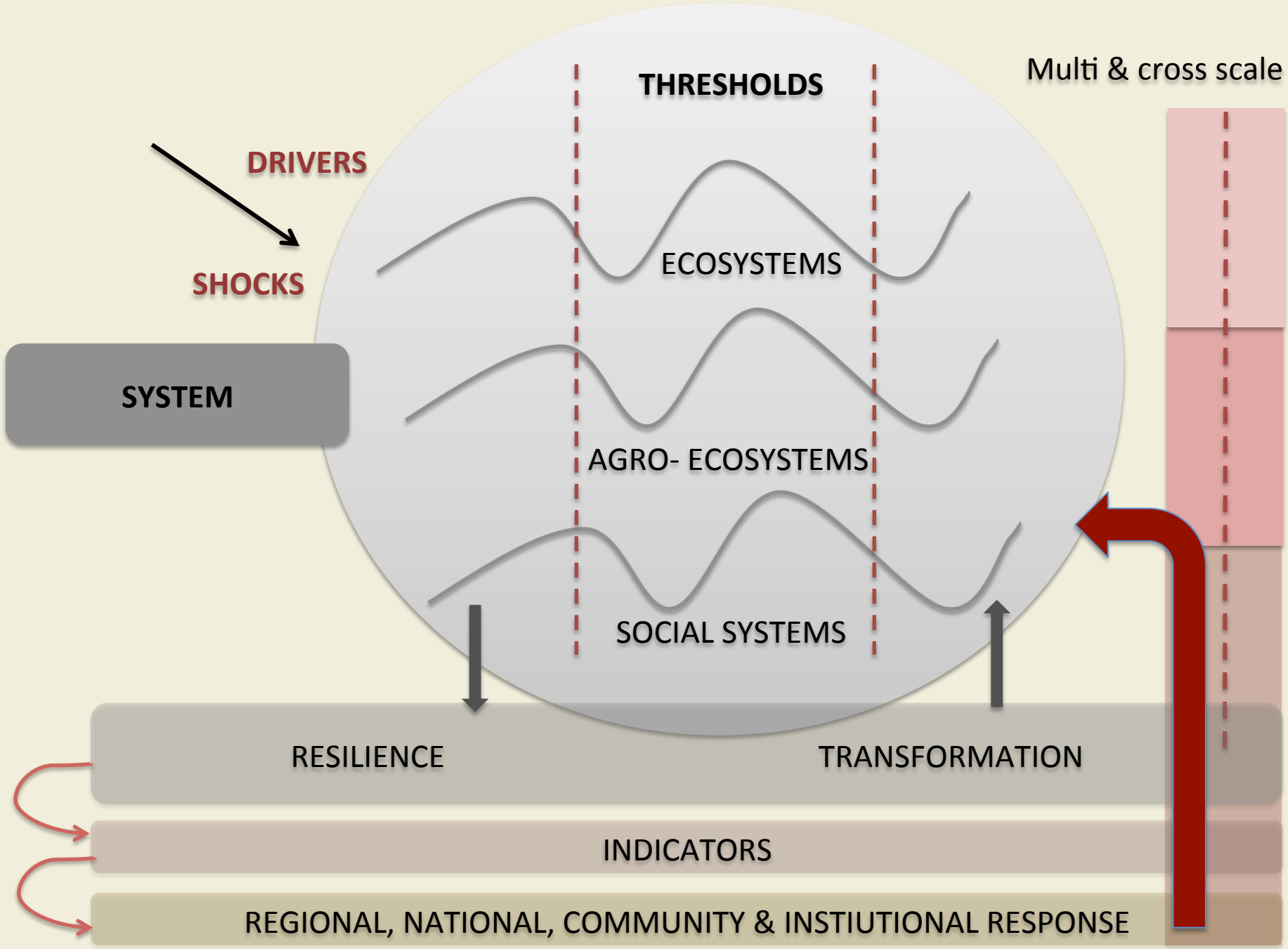
Walker, B.H., C.S. Holling, S.C. Carpenter, and A.P. Kinzig. 2004. Resilience, adaptability and transformability. Ecol. Soc.9(2): Article 5.
Cumming, G.S., G. Barnes, S. Perz, M. Schmink, K.E. Sieving, J. Southworth, M. Binford, R.D. Holt, C. Stickler, and T.Van Holt. 2005. An exploratory framework for the empirical measurement of resilience. Ecosystems 8:975–987.

What are we aiming for by building resilience?

- *Fostering "…the ability of countries, communities, and households to manage change, by maintaining or transforming living standards in the face of shocks or stresses – such as …drought or violent conflict – without compromising their long-term prospects."*
  - Department for International Development (DfID). 2011. Defining Disaster Resilience: A DFID Approach Paper. London: DFID.

Why resilience?

- Approach that helps us understand and address the complexity we face in HoA systems
- Incorporates both ‘coping with’ and ‘recovery from’ disturbances
- Resilience can be regarded as necessary for sustainability in the face of change and uncertainty as facing the Horn of Africa region
- Moves away from traditional approaches to agricultural development focused on productivity and food security to alleviate poverty and considers range of factors such as climate change, economic volatility and external shocks


Multi & cross scale
THRESHOLDS
DRIVERS
SHOCKS
SYSTEM
ECOSYSTEMS
AGRO- ECOSYSTEMS
SOCIAL SYSTEMS
RESILIENCE
TRANSFORMATION
INDICATORS
REGIONAL, NATIONAL, COMMUNITY & INSTIUTIONAL RESPONSE

What difference does a resilience approach make to programming?

- Puts adaptive capacity and vulnerability reduction at the centre
- Manage change without compromising long term prospects
- Putting people on better pathways
- Addressing root causes
- Recognizing and fostering learning and innovation

Prioritizing interventions

- Resilience bridges “relief” and development (Resilience with Growth)
  - Clustering investments and interventions
- Integrated analysis across disciplines considering thresholds and tradeoffs
- Indicator base for measurement allows temporal and spatial analysis and to ‘track’ resilience

LIFESCAPES

Income and Livelihoods

- Diverse sources of income
- Right to **livelihood choice** and support for that choice
- Livelihoods adapted to environmental / material resources
- Access to credit
- Well functioning markets

Physical Capital

Good infrastructure connectivity, phones, electricity

Sustainable and equitable access to resources

Access to water- potable and for livestock

Secure land and livestock assets

Proactive Development

- Community input to development priorities and management of resources
- Integrated forward thinking social systems that are productively flexible, have opportunities, skills and resources and incorporate social protection

Health and Nutrition

- Healthy children
- Food secure – well nourished children & adults & a healthy balanced diet
- Higher life expectancy
- Health care

Education and Capacity

- Access to education for girls and boys
- Schools in communities and classes full
- Presence of individual and community capacity

Not Vulnerable

- No need for humanitarian assistance
- Ability to cope – buoyancy and elasticity
- Ability to maintain assets in the face of shocks
- Social systems adapted to drought

LANDSCAPES

Healthy Rangelands

- Favourable for rangeland development
- Livestock rearing with sustainable grazing practices
- Pastoral mobility

Functioning Ecosystem Services

- Functioning watershed
- Landscapes which are not stressed due to diversity, redundancy & functionality
- Capable of regeneration
- Ecosystem services intact and able to produce sustainable goods and services
- Multi-dimensional interconnected landscape

Good Governance

- Sustainable and equitable access to resources
- Defined boundaries
- Local governance of resources and natural resource management
- Equity and sharing of resources
- Access to resources and cross-border co-ordination and consideration
- Facilitated mobility – policy, infrastructure and security
- and conflict resolution plans in place

Productivity

- Beautiful, prosperous landscapes
- Growth, sustainability, good production and a decent environment
- Increased land productivity
- Ecological food production with polycultures

Adaptable

- Adaptability to react to a changing climate and be economically viable

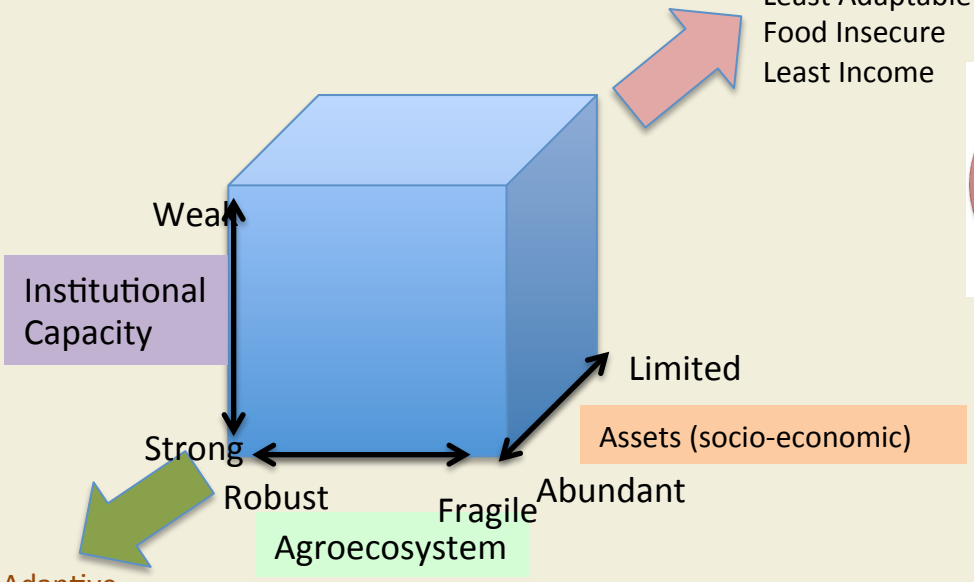
Using indicators – measuring livelihood resilience

Measure	Indicator
Profitable	Income over cost for livelihood
Healthy and happy, men, women & children	Gross domestic happiness Household Dietary Diversity
Bounces back and withstands shocks	Household volatility, assets and diversity
Profitable	Income over cost for livelihood
Ability to maintain assets in the face of shocks	Asset index
Sustainable and productive livelihoods	Ability to retain and / or generate assets in a sustainable manner
Integrated, forward thinking social systems that are productively flexible, have opportunities, skills, and resources, incorporate social protection and have a majority of surpluses.	Investment – restart mechanisms Planning – social protection
Needs for the people	Basic service indicators

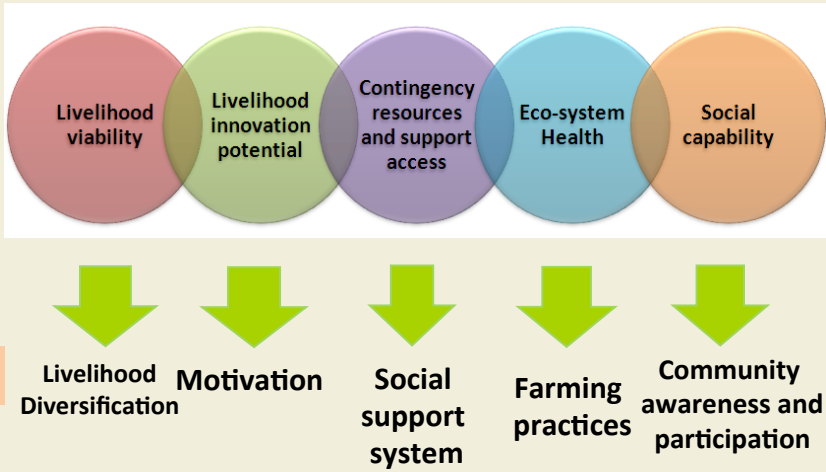
Using indicators – measuring landscape resilience

Measure	Indicator
Functioning watershed	Water audit of the catchment
Ecological food production with polycultures	Extent of biodiversity
Diverse ecosystem and sustainable use	Quantity / quality / diversity of natural resources Institutions and management of natural resource systems
Evergreen living soils, proper land use and resource management	Soil health and productivity and land use
Favorable for rangeland development	Water availability Livestock marketing systems
Landscapes and system that are not in stress because of diversity, redundancy and functional social systems and available resources for shock absorption.	Capable of regeneration Total biomass of geographic area and its changes over time
Capable of regeneration	Total biomass in geographic area and its changes over time
Landscapes that provide sustainable critical ecosystem services	Sufficient water resources for agriculture and pastoralism
Able to provide the needs for the people	Basic service indicators – food, water, feed for livestock, people, recreation

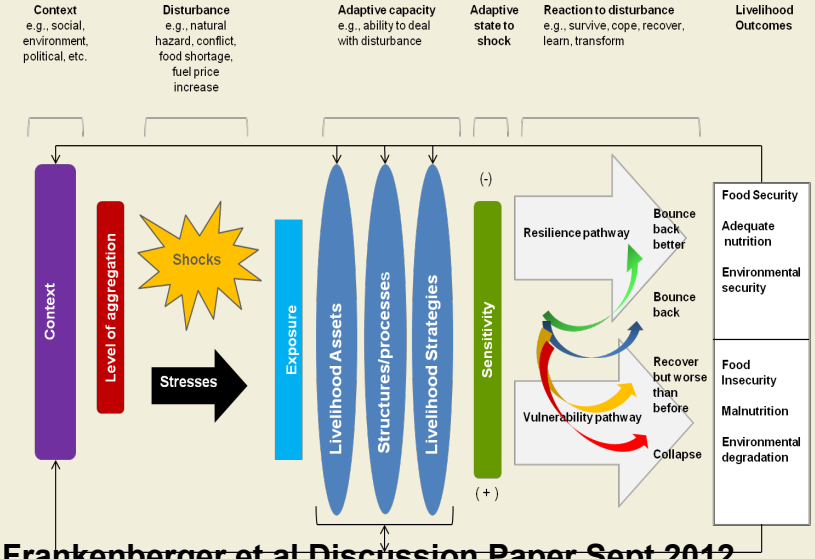
Resilience Framework after Fraser et al 2011



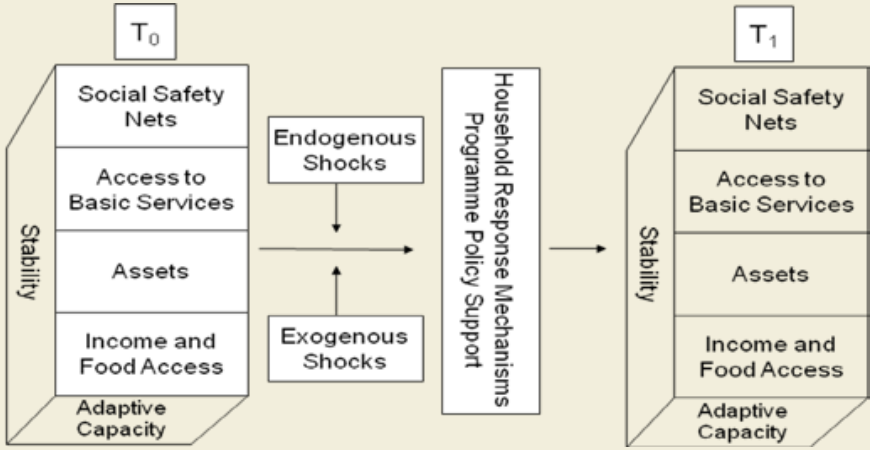
Adapted Fraser 2007 Climatic Change 83:495-514



Karl Hughes Oxfam GB



Frankenberger et al Discussion Paper Sept 2012



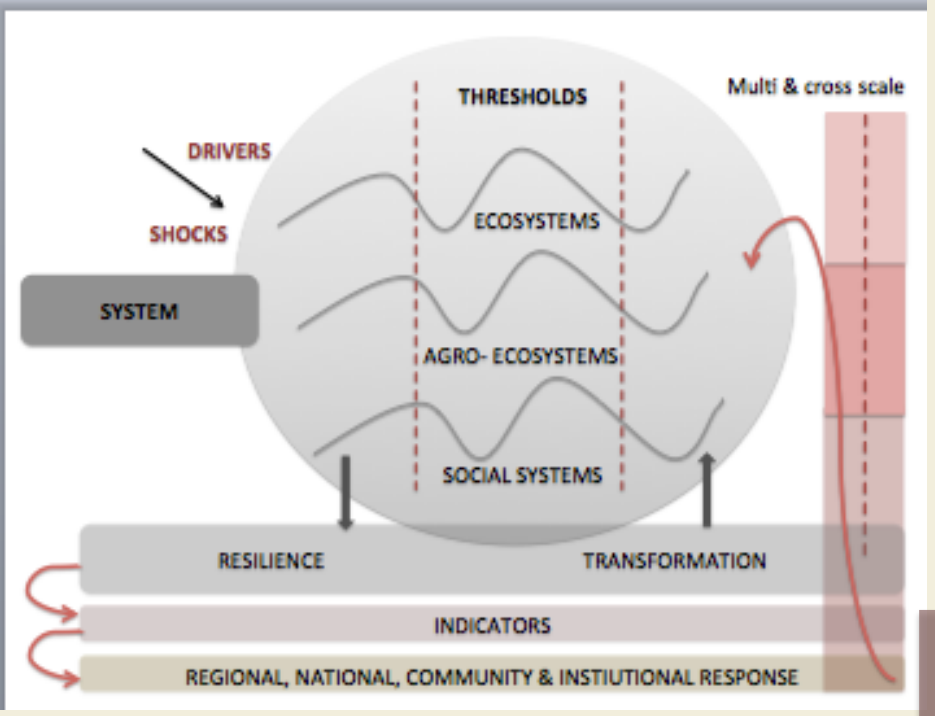
FAO 2012 Measuring Resilience Concept Note

A resilience approach should add value to what we already know works

- What evidence do we currently have to build a framework?
  - Especially from communities themselves
- Need a robust understanding of what interventions work and how they add value to resilience?
  - Reduce vulnerability?
  - Enhance adaptive capacity?
  - Accommodate constant change?
  - Allow learning?
  - Offer flexibility?

Prioritizing interventions and investments

- Clarity on desired outcome
- Understanding of what has to be in place to achieve outcomes and the indicators that match
- Ex-ante analysis of decisions
- Interactions between investments
- Timely feedback mechanism in place



SYSTEM

USE EXISTING DATA, GOOD PRACTICE & POLICY ANALYSIS

TESTING & INNOVATION

FEEDBACK LOOPS

PRIORITISED DECISION MAKING FOR INVESTMENTS AND INNOVATION IN RESEARCH, PRACTICE & POLICY

RESILIENCE FRAMEWORKS

TODAY

DESIRED OUTCOMES

TECHNICAL CONSORTIUM

Testing & innovation

Regional expertise

Multiple stakeholders

RESEARCH FOR DEVELOPMENT PARTNERSHIPS