

“Food for Thought”

Sustainable Natural Resource Management,
Disaster Risk Reduction and Food Security

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Our Jargon

- Sustainable Natural Resource Management
- Food Security
- Disaster Risk Reduction

Disaster Terminology / Concepts

- Disaster
- Disaster Risk Reduction (DRR)
- Hazard
- Vulnerability
- Risk
- Capacity

Disaster

- Serious disruption of the “normal” functioning of society
- Threatens to cause or causes human, material, or environmental losses
- Exceeds the ability of affected community to cope using own resources.

Disaster Risk Reduction

- Is the the systematic development and application of
 - policies,
 - strategies and
 - practices
- to
 - minimize vulnerabilities and disaster risks throughout a society,
 - address the root causes that underly or cause disasters
 - avoid (prevention) or to limit (mitigation and preparedness) adverse impact of hazards,
- operates within the broad context of sustainable development

Disaster Risk Formula

Disaster Risk = Hazard (H) x Vulnerability (V)
Capacity (C)

OR

Disaster Risk = function of (H and V / C)

Hazard

- Potentially damaging event, phenomenon or human activity:
 - which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation
- Hazards have different origins

Examples of hazards

- Natural
 - Drought
 - Extreme weather events
 - Flood
 - Earthquakes
- Anthropogenic
 - Socio-political
 - War
 - Discrimination/Xenophobia
 - Corruption
 - Social instability/poverty/crime
 - Industrial
 - Pollution /contamination

Vulnerability

- set of prevailing or consequential conditions
- composed of physical, socio-economic and/or political factors
- adversely affect the ability of communities to respond to events.
- also, the characteristics of a person or group in terms of their capacity to anticipate, cope with, resist and recover from the impact of a hazard.

Aspects contributing to vulnerability

- Political
- Economic
- Physical
- Socio-cultural
- Environmental

Types of hazards

- Slow onset
 - Climate related hazards, environmental degradation or pollution, deforestation
 - Socio economic and political drivers at ALL scales (key issues of governance, human rights, economic equality and distribution of global wealth)
 - Disease pandemics

Types of hazards...continued

- Rapid or sudden onset
 - Strike without prior warning
 - E.g. veld fires, floods and flash floods, volcanic eruptions, tsunamis, disease and pest infestations.

The Progression of Vulnerability

Root Causes

Limited access to:

- Power
- Structures
- Resources

Ideologies

- Economic systems
- Political systems

Dynamic Pressures

Lack of:

- Local institutions
- Training
- Appropriate skills
- Local investment
- Local markets
- Press freedom
- Ethical standards in public life

Macro-forces

- Rapid urbanisation
- Rapid population growth
- Debt repayment schedules
- Deforestation
- Decline in soil productivity

Unsafe Conditions

Fragile physical environment

- Dangerous locations
- Unprotected buildings and infrastructure

Fragile local economy

- Livelihoods at risk
- Low income levels

Vulnerable society

- Special groups at risk
- Lack of local institutions

Public actions

- Lack of disaster preparedness
- Prevalence of endemic disease

Disasters

$$\text{Risk} = \text{Vulnerability} \times \text{Hazard}$$

$$R = H \times V$$

Hazards

- Earthquake
- Severe weather conditions
- Flooding
- Volcanic eruption
- Landslide
- Drought
- Virus and pests
- Technological

The Progression to Safety

Reduce Disaster Risk

Address Root Causes

Increase access of vulnerable groups to:

- Power structures
- Resources

Challenge any:

- Ideology, political system, or economic system where it causes or increases vulnerability.

Reduce Pressures

Development of:

- Local institutions
- Education
- Training
- Appropriate skills
- Local investment
- Local markets
- Press freedom
- Ethical standards in public life

Macro-forces

- Population and health programmes
- Manage urbanisation
- Adapt arms industry for development purposes*
- Reschedule debt payments
- Re-afforestation

Achieve Safe Conditions

Protected environment

- Safe locations
- Hazard resistant buildings and infrastructure
- Diversification of rural income opportunities

Resilient local economy

- Strengthen livelihoods
- Increase low incomes

Public actions

- Disaster preparedness
- Early warning systems

Reduce Hazards

Aim for a controlled situation:

No loss of life
No/few casualties
No /restricted damage
Food security

A range of measures to reduce certain hazards:

- Flood control
- Shelter breaks to reduce wind force
- Dykes
- Fire breaks

The Nexus

A Photo Story





HENDRIK VERWOERD
TONNELS · TUNNELS
1961 1961



















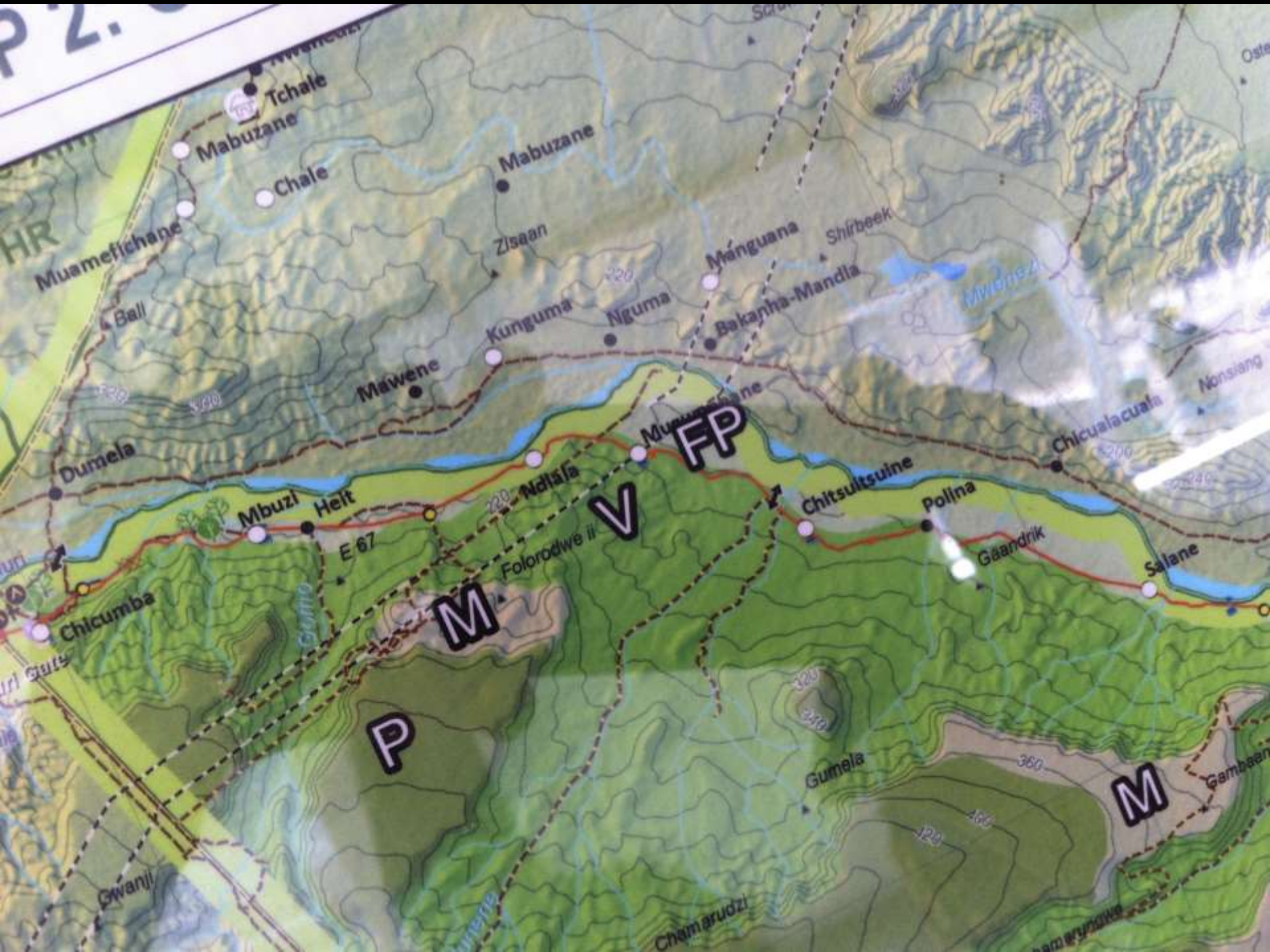


















PARADISE











DEVOLUTION



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