THE

MAURITIAN

EXPERIENCE

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National Climate Committee
and
Mauritius Sugar Industry
Research Institute

TECHNOLOGY NEEDS ASSESSMENT

AND

MAINTENANCE AND ENHANCEMENT
OF CAPACITIES FOR
CLIMATE CHANGE ACTIVITIES

September 2004
NATIONAL CIRCUMSTANCES

Area 2040 km²
Population 1.21 million
Density 596 km⁻²
GDP 4000 USD
Literacy rate 85% (12+)
Economy Manufacturing
Tourism
Agriculture
Services
**VULNERABLE SECTORS**

**Review of INC and CCAP**

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**Indepth V&A studies are vital for a good TNA**
TNA PROCESS

1. Identification of resource persons and stakeholders
2. Prioritization of sectors
3. Team building and leadership
4. Elaboration of workplan
5. Exercise based on UNDP guidelines
6. Methodology amended to suit the country
7. Feedback from stakeholders on draft report
8. Final reporting and submission to UNEP
METHODOLOGY

UNDP guidelines could not be adopted as such

• Limited national competency
• Complexity of exercise

Appropriate methodology developed

Exercise simplified - a series of steps

New workplan and framework adopted
STEPS IDENTIFIED AND ADOPTED

• Current circumstances
• Technologies in use
• Institutional Framework
• Data gaps and remedial measures
• Impacts of CC
• National Development Plans and Projections
• List of possible technologies
• Policies and Measures
• Technologies that can be adopted
• Evaluation Matrix
• Barriers to TT and steps to overcome
• Implementation Plan
• Conclusions
KEY ISSUES FOR CHOICE OF TECHNOLOGIES

- Maturity of technology for adoption
- Opportunities for successful transfer
- Cross-cutting issues

PRELIMINARY SELECTION CRITERIA

- Expert assessment and/or judgement
- Government priorities within national development plans
- Stakeholder consultation
MAIN CRITERIA FOR MATRIX EVALUATION

- National sustainable development and policy goals
- Adaptation potential
- Environment friendliness
- Market potential and costs
AGRICULTURE - SUGARCANE

Indepth V&A study carried out previously

Highly vulnerable sector

Cause: Higher evapotranspiration demand

Adaptation options

- Coping with water demand
- Alternative Crop
- Shifting cultivated areas
- Change harvest dates
- Adapted Cultivars
AGRICULTURE - SUGAR CANE

Technologies assessed

- Extend irrigation facilities (1)
- Increase water use efficiency
- Increase irrigation efficiency (3)
- Trash blanketing (2)
- Drought/heat toleration
AGRICULTURE – OTHER CROPS

Vulnerability

Heat stress

Water stress

Weather extremes

Adaptation technologies

New agricultural techniques (1)

Irrigation

Protected cultures (2)
FORESTS and OTHER LAND USE

- Reforestation of degraded forests
- Conversion to nature reserves and parks
- Strengthen forest management

Other Land Use

Minimal changes as land is a limited resource

Technologies to be further applied

- GIS
- Remote sensing
- Satellite imagery
- Aerial photography
- Biotechnology
WATER RESOURCES

Highly vulnerable - reduced hydrological regime

Adaptive technologies

• Increase surface water storage
• Reduce loss of surface runoff
• Desalination
• Efficient pricing mechanism
• Waste water recycling (1)
• Increase use of gray water
• Increase irrigation use efficiency (2)
• Reduce leakages (3)
• Drought toleration
COASTAL ZONE

IMPACTS

- Coastal erosion
- Ecological systems
  - Reefs
  - Lagoon
  - Mangroves
  - Estuaries
- Infrastructure
- Salt water intrusion
- Coastal fishery
COASTAL ZONE
TECHNOLOGIES FOR ADOPTION

Retreat
Setback building distance (3)

Accommodate
Tidal waves warning systems
Waste/rain water management

Protect
Building with nature techniques (1)
Coral protection and artificial growth (1)
Beach nourishment
Bulk heads and Sea-walls, Breakwaters
BARRIERS and IMPLEMENTATION PLAN

- Barriers analysis remains a difficult task
- Suggestions for removal made
- Prepared in accordance with government plans
- Political v/s scientific agenda
- Lack of interaction and response from stakeholders
RESPONSE FROM STAKEHOLDERS

Very Limited and scanty at all levels

- Poor knowledge of subject
- Low awareness of CC and related issues
- Disinterested and not motivated
- Interaction policy-makers and scientific community
- Attitude and Dedication
CONSTRAINTS and DIFFICULTIES

- Inadequate institutional capacity
- Lack of resource persons
- Lack of competencies
- Poor knowledge of Convention and related issues
- Time allocation
- Insufficient incentives
- Lack of interest
- Linkage with policymakers
NEEDS

Capacity Building
  Institutional
  Policy makers and planners

Resources
  Financial and Equipment

Training
  Professionals
  CC experts

Others
  Framework for implementation of the Convention
  Information network
CONCLUSIONS

- Enriching exercise
- Still incomplete
- Will exists
- Poor knowledge of CC issues
- Lack of interaction
- Integration of CC in National Planning
- Availability of information
- Operational framework
- Incentives
THE WAY FORWARD

education and population Awareness
THE WAY FORWARD

political will
for
Sustainable development
Thank you