Climate-proofing Energy Systems

Laura E. WILLIAMSON

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COP 15

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Energy resilience and development

- Tight connection between resilience⟺diversity⟺sustainability
- Current energy policies driven by need to reduce/manage anticipated climate risk = mitigation
  - adaptation component?

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Key issues

- Energy is central to ecodevelopment and poverty alleviation
- Under a climate change scenario:
  - reduce vulnerabilities
  - adapt energy systems

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Climate impacts & energy provision

- Climate change: impacts **both** demand and supply-side of energy production
  - impacts of temperature and climatic changes direct AND indirect
- No commonly accepted parameters/indicators to compare:
  - adaptation needs
  - effectiveness of adaptation measures

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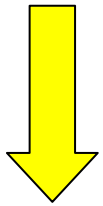
HELIO's contribution

- Developed methodology and indicators for energy systems
  1. identify key energy systems
  2. measure vulnerability
  3. assess adaptive capacity



vulnerability + adaptive capacity = level of resilience

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Indicators: what to measure….

- Vulnerability / Resilience
  - individual energy systems
  - transmission and distribution
- Capacity
  - monetary
  - technological
  - human
  - institutional
    - governance; siting; regulation etc.

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Applying the indicators: Africa as testing ground

- Benin
- Burkina Faso
- Cameroon
- Dem. Rep. Congo
- Kenya
- Mali
- Nigeria
- Senegal
- Tanzania
- Uganda

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Why Africa?

- uneven distribution of energy resources
- energy interdependence
- woodfuel energy economy
- petroleum/fossil fuel exposure
- climate impacts on hydropower
- limited investment
- governance issues

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Recommendations

1. Assess + monitor energy systems to ensure system can adapt to anticipated climate change impacts
2. Expand current assessment process for new energy systems
3. Develop medium- to long-term strategies for decentralised, low carbon energy supply system

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Recommendations contd.

4. Implement energy demand management as adaptation measure
5. Cultivate in-country capacity to evaluate/respond to energy needs from climate perspective
6. Invest in ecosystem services that support existing and planned energy production

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Recommendations contd.

7. Establish transparent technology transfer and financing procedures
8. Develop participatory governance to truly understand energy needs and mobilise support to promote ecodevelopment

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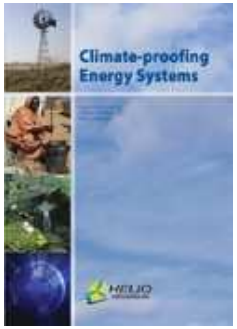
Reports, indicators and more...

- Go to: www.helio-international.org
- Click on:



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