

ICSU Regional Office for Africa Priority Area Sustainable Energy for sub-Saharan Africa

Dr Janine Chantson

ICSU Mission

To strengthen international science for the benefit of society

- to identify and address major issues of importance to science and society
- to facilitate interaction amongst scientists across all disciplines and from all countries
- to promote the participation of all scientists, without any segregation, in the international scientific endeavour
- to provide independent, authoritative advice to stimulate constructive dialogue between the scientific community and governments, civil society and the private sector

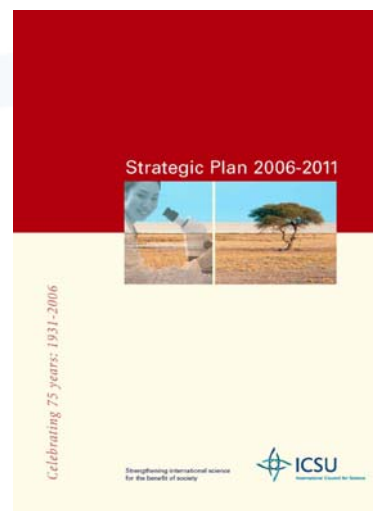
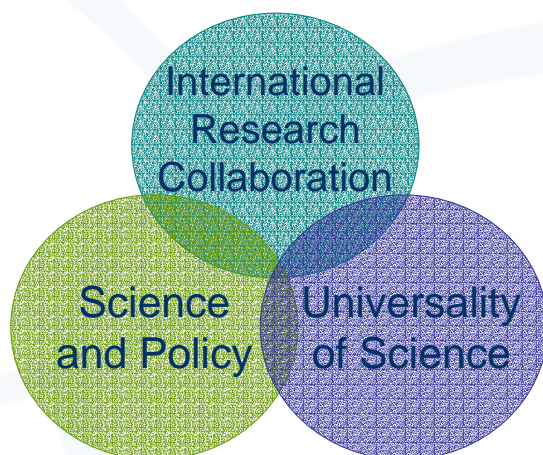
ICSU: who and what?



- Founded in 1931, but roots back to 1899
- A membership organization with:
112 National Members, and
29 International Scientific Unions
- Establishes Interdisciplinary Bodies (18)
in key areas
- Limited finances but unique worldwide
access to intellectual resources

3

Strategic Plan: 2006 - 2011



4

ICSU Regional Offices



Aim:

To ensure that the voice of developing countries influences the international agenda and that scientists from the South are fully involved in international research guided by regional priorities

- Africa (Pretoria, South Africa) inaugurated 1 September 2005
- Asia and the Pacific (Kuala Lumpur, Malaysia) inaugurated 19 September 2006
- Latin America and the Caribbean (Rio de Janeiro, Brazil) inaugurated 18 April 2007
- Fourth Office to follow in the Arab Region

5

ICSU ROA priority areas



- Sustainable Energy
- Health and Human Well-being
- Natural and Human-induced Hazards & Disasters
- Global Change

6

Global Change – key research areas



Land degradation, Biodiversity loss & human well-being

- Development of sustainable alternative livelihood options to reduce the pressure on existing biodiversity
- Development of strategies for conservation & sustainable use of biodiversity-based natural resources

Resilience of food supply systems

- Trade-offs for agriculture w.r.t. use of land for biofuels vs food production?

7

ICSU Energy Activities



International Science Panel on Renewable Energy (ISPRES)

- Renewable Energy Policy Network
- Intl Council of Academies of Engineering & Technological Sciences
- 1st meeting Jan. 2007
- Improve effectiveness and coherence of R&D
- Provide strategic guidance for renewable energy R&D efforts
- Identify critical gaps and recommend future priorities and strategies

8

ICSU Energy Activities



- ICSU working group on Energy & Sustainable Societies
 - 2002-2004
- ICSU IUPAP working group on Energy
 - Report on R&D of Energy Technologies Oct 2004
- Proposed workshop APS/WCPSD/KITE: Local Energy Solutions and Technology Development for the ECOWAS sub-region
 - Ghana, Jan. 2008

9

Sustainable Energy: **Proposed projects**



1. Development of energy models and scenarios for sub-Saharan Africa
2. Increase in access to high quality, reliable and affordable energy in a sustainable manner
3. Strengthening and retention of human and institutional capacities

10

Project 1. Development of Energy Models & Scenarios for sub-Saharan Africa



General Objective

To develop energy models & scenarios with related activities for optimizing, effectively managing and planning energy production and use in the region

11

Project 1. Development of Energy Models & Scenarios for sub-Saharan Africa



Proposed Scientific Activities (1)

short term

- Collect and assess the different national, sub-regional, regional developmental plans, models & scenarios for SSA countries; and develop common generic variables which will form the basis for establishing consistent storylines that reflect the national, sub-regional and regional conditions

12

Project 1. Development of Energy Models & Scenarios for sub-Saharan Africa



Proposed Scientific Activities (2)

short term

- Identify & assess the capacity needs for effective development of models & scenarios for the region
- Link with existing initiatives (AFREC, UNECA, AU/NEPAD) to develop a robust database for effective modeling & scenario-building

13

Project 1. Development of Energy Models & Scenarios for sub-Saharan Africa



Proposed Scientific Activities (3)

medium/long term

- Enhance human & institutional capacity
- Develop inter-institutional collaboration
- Develop detailed scenarios & models, considering different energy sources & new/emerging technologies

14

Project 1. Development of Energy Models & Scenarios for sub-Saharan Africa



Expected Outcomes

- Energy database suitable for modeling/ scenario-building
- Different energy scenarios & models for policy testing
- Trained personnel & enhanced institutional capacity
- Enhanced collaboration between modeling centres

15

Project 2. Increase access to high quality, reliable & affordable energy in a sustainable manner



General Objective

To provide the information and knowledge for ensuring a substantial increase in the supply of, and access to affordable energy in both rural and urban areas in a timely manner so as to promote economic growth and sustainable development through stimulating energy demand while maximizing the use of all indigenous energy resources

16

Project 2. Increase access to high quality, reliable & affordable energy in a sustainable manner



Proposed scientific activities (1)

Short/medium term

- Review existing energy & energy-related production and use; identify research gaps and useful lessons for scaling up and financing strategies, flagship energy supply projects, energy efficiency programmes & renewable energy projects
- Develop standards/sustainability benchmarks

17

Project 2. Increase access to high quality, reliable & affordable energy in a sustainable manner



Proposed scientific activities (2)

medium term

- Develop projects for stimulating energy demand as well as creating wealth and employment

18

Project 3. Strengthening & Retention of Human & Institutional Capacities in the Energy Sector



General Objective

- To contribute to the strengthening and retention of energy and energy-related human and institutional capacities in SSA

19

Project 3. Strengthening & Retention of Human & Institutional Capacities in the Energy Sector



Proposed scientific activities (1)

short term

- Conduct a review & assessment of human & institutional capacity needs and propose relevant actions to address these needs
- Convene specific workshops for discussion & information exchange; facilitate the establishment of a network of energy experts
- Hold capacity strengthening workshops on enterprise development
- Develop regional task forces around energy sources

20

Project 3. Strengthening & Retention of Human & Institutional Capacities in the Energy Sector



Proposed scientific activities (2)

medium/long term

- Develop a database on regional energy experts, resources and projects that is easily accessible to governments & relevant organizations
- Develop new training programmes that compliment existing programmes for all level of the educational system, especially schools
- Develop mechanisms of retaining trained energy experts and addressing brain drain

21

Biofuels: Project proposals (SABA)



1. Electronic library for Biofuels in Southern Africa
2. Testing centre for applied technologies for biofuel production using African resources
3. R&D support scheme for energy efficient public transport in Africa
4. Scientific strategic policy advisory service for the development of a RE sector in Africa
5. Facilitation of best Praxis examples in PV applications for Africa

22

ICSU News and Events



For more information and up-dates, visit

The ICSU global website: www.icsu.org

And the ICSU ROA website:
www.icsu-africa.org

Email: j.chantson@icsu-africa.org