



**9th ICA Africa
Regional
Assembly 2010**

**October 2010
Maseru, Lesotho**

**Climate Change
Documentation**



Resolution on Climate Change

ICA General Assembly, 20 November 2009

Towards a Sustainable Energy Economy

Resolution adopted unanimously on 20 November 2009

The ICA at its General Assembly in Geneva on 20 November 2009,

ACKNOWLEDGING that the world faces unprecedented threats of global economic failure, rising energy prices and real time impacts of climate change on the earth's ecosystems, particularly on agriculture and food production,

RECOGNISING that policy-makers lack a clear economic vision and plan of action to address the challenges of global economic recovery, energy security and climate change for the 21st century,

NOTING that renewable forms of energy—solar, wind, hydro, geothermal and biomass – are becoming increasingly competitive and that to maximise the potential of intermittent renewable energies, an enhanced energy infrastructure and storage technologies will need to be developed,

FURTHER NOTING that residential, commercial and industrial buildings worldwide consume a significant percentage of all energy produced and therefore represent a major opportunity for energy innovation through efficiency improvements and on-site generation,

CONSIDERING that a reconfiguration of the power grid that takes advantage of new communication technologies will allow enterprises and individuals to have much greater control over their future energy use,

BELIEVING that if millions of individuals and communities around the world take control of their own energy future through the local commitment to renewable energy technologies and energy efficiency improvements, the result would be a profound shift in the configuration of power where local peoples would be less subject to the will of remote decision-making and communities would be better enabled to produce goods and services locally, thus contributing to a democratisation of the energy sector and to sustainable economic development worldwide,

RECOGNISING that co-operatives with their unique set of values and principles as well as their geographical coverage are particularly well placed to lead this initiative,

CALLS on ICA members and the worldwide co-operative movement to play a central role in fostering new frameworks for the democratisation of energy by engaging co-operatives in all sectors to encourage the implementation of a renewable energy/energy efficiency vision.

Renewable Energy Checklist

In order to assist co-operatives in the implementation of the resolution, below is a checklist of different renewable energy options along with the pros and cons of each option. There are also some links for more information and some development agencies who are assisting in the implementation of renewable energy in Africa.

The following main options available today which are summarised in this document: solar power, wind power, biofuels, water power, and geothermal.

Solar Power

Pros

- Free Energy
- Produces no pollution
- In sunny countries (such as Africa) easy to install and provide power to the most remote areas

"The Sun is Free"



Cons

- Does not work at night
- Extremely expensive (though costs are decreasing as technologies improve)
- Can be unreliable without adequate sun

How it works

Solar Cells

- Convert light directly to energy
- One square meter of cells can power a 100w light bulb
- Solar Water Heating (Great in Sunny climates)
- Heat from the sun heats water in glass panels
- Can heat water without using gas or electricity

Solar Furnaces

- Huge mirrors that concentrate suns power to create high temperatures
- Can be used to cook food

Wind Power

Pros

- The cheapest option for renewable energy
- Easily installed in rural/remote areas
- Large wind farms provide cheap renewable energy for large urban areas
- Easy to maintain
- Can work under low wind conditions

Cons

- Wind is unpredictable, some days may not provide any win
- Best places for wind farms are near coastlines

How it works

- Wind turns propellers which turn a generator
- The more towers and the bigger the propellers the more electricity



Energy, cont.

BioFuels

Pros

- Using waste to create energy, decreases overflows of waste
- Cheap
- Decreases demand for fossil fuels

Cons

- Difficult in collecting/growing fuel in adequate amounts (particularly in areas where crops are difficult to grow and food is scarce)
- Burning bio fuels creates greenhouse gasses, same as fossil fuels

How it works

- Fuel is burned
- Heat water to create steam
- Turns turbine that turns generator



Hydropower

Pros

- Clean/emission free powerful source of free energy
- Power is generated constantly
- More reliable than solar or wind power

Cons

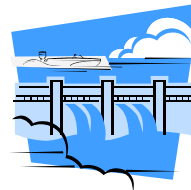
- Building of dams is extremely expensive and often paid by loans which lead to debts
- Suitable dams sites are difficult to find (particularly in areas which lack water and are prone to heavy drought)
- Building of dams will result in flooding

How it works

- Dam is built to trap water
- Water flows through tunnels which turn generators
- Producing massive amounts of electricity
- The Hoover Dam provides most of the energy to power Las Vegas

Small hydropower

- Works in the same manner as larger hydropower only on a smaller scale
- Suited for remote areas



“Africa has massive hydropower capacity, of which less than 7% has been harnessed.” (UN)

“Much of the unexploited potential for small hydro is in remote areas of Africa. Eastern and southern Africa is endowed with a large number of permanent streams, rivers and tributaries that provide excellent hydropower development potential. Small hydro utilization in the region is still very low. There is limited information on small-hydro sites in the region.” (UN)

Geothermal

Pros

- No pollution
- Small power plants

Cons

- Difficult to find a suitable place to build a geothermal power plant
- Geothermal sites may run out of steam



Energy, cont.

- Can produce hazardous gasses

How it works

- Drilling into “hot spots” inside the earth
- Water is sent down
- Steam rises and powers turbines

“Africa has the potential to generate 9,000 MW of energy from geothermal power.” (UN)

Source information from:

- Energy Resources: <http://home.clara.net/darvill/altenerg/index.htm>

Development Organizations:

- African Wind Power (AWP): <http://www.africanwindpower.com/certifications.htm>
- Craftskills: <http://craftskills.biz/why-wind.htm>
- Africa Biofuel: <http://www.africabiofuel.com/>
- T4CD (Technologies for Conservation and Development): <http://www.t4cd.org/Pages/HomePage.aspx>
- SIDA (Swedish International Development Cooperation Agency): <http://web.mit.edu/urbanupgrading/upgrading/resources/organizations/Sida.html>
- NEPAD (The New Partnership for Africa’s Development): <http://www.nepad.org/home/lang/en>

Important Links

- A report provided by the UN and the Republic of Senegal that details renewable energy development in Africa, potential of various options, and states barriers to obtain renewable options: <http://www.un.org/esa/sustdev/sdissues/energy/op/nepadkarekezi>
- A manual on how to manage and incorporate various power supplies in remote locations and protected areas: <http://www.t4cd.org/Projects/Current%20Projects/Documents/Training%20Manual%20-%20Remote%20Power%20Supply.doc>
- An article detailing solar energy in Africa: <http://www.un.org/ecosocdev/geninfo/afrec/vol20no3/203-solar-power.html>

Sustainable Tourism

The travel and tourism sectors are becoming increasingly important industries for countries around the world; specifically developing countries. In an effort to showcase the benefits of competing as a co-operative in the tourism industry, a brief outline has been put together introducing the industry and its long-term gains.

Economic Value of Travel and Tourism:

Travel and tourism possesses the capacity to stimulate employment for both skilled and unskilled workers, stimulate investment, strengthen the economic structure, contribute to the balance of payments, and increase overall GDP. The travel and tourism sector is characterized by quick returns on low investment.

- This industry accounts for approximately 10% of worldwide GDP

Tourism, cont.

- Contribution of travel and tourism to GDP is expected to rise from 9.2% (US \$5,571 bn) in 2010 to 9.6% (US \$11,151 bn) by 2020.
- Real GDP growth for travel and tourism industry expected to average 4.4% per year over the next 10 years.
- Creates approximately 230 million jobs both indirectly and directly, making up 8% of the global workforce.
- Specifically beneficial for developing countries as an industry that could serve as principle export
 - Currently accounts for 83% of developing countries' exports, and 1/3 of these countries rely on tourism industry to be their primary export.
 - The world's 40 poorest countries, tourism industry serves as second most important source of foreign exchange.

Cultural and Social Gains

Aside from economical gains, the tourism industry also fosters social harmony, alleviates poverty, raising ethical standards of tourism and facilitates international understanding.



Responsible Tourism

- Responsible travel to natural areas that conserves the environment, respects the local culture, and improves the well-being of the local inhabitants.
- Recognizes the central role of the local host community and its rights as the main player in sustainable community development
- Encourages positive interactions between the local host community, tourism industry and tourists.

Eco-Tourism

Eco-tourism deals with uniting conservation, communities, and sustainable travel. Both Responsible Tourism and Eco-Tourism involve:

- Minimizing impact
- Building environmental and cultural awareness
- Providing positive experiences for both hosts and visitors
- Providing direct financial benefits for conservation
- Empower and provide financial benefits for the local population
- Raise sensitivity to host country's political, environmental, and social climate

How to be Successful

- Monitor international trends
- Ensure the product meets demand
- Engage tourism stakeholders
- Network
- Follow cultural norms and values, that if not followed, would upset the host country
- BE CREATIVE and build off of existing resources and expertise

Opportunities for Co-operatives in Tourism

- Shift towards decentralized forms of tourism with emphasis on



Tourism, cont.

stakeholder participation

- Look for partnerships within private and public sectors as well
- Growth in rural tourism products (agritourism, ecotourism, tribal tourism)
 - Rural areas are target areas for tourism development
- Tourism as a means to alleviate poverty, diversify incomes, and stemming rural-urban migration



Target Markets

- Tour operators and travel agents
- Travellers
- Universities, schools, and training institutions
- Central and local public institutions
- The press

Instruments for Success

- Participation at trade events, fairs, conventions and events
- Logo Management
- Newsletters, publications and websites of successful cooperative tourism ventures
- Partnerships with the private and public sector

Potential Road Map

Assess market demand and identify areas of competitive advantage.

- Establish networks and create umbrella body
- Develop standards and brand
- Identify public sector support (beware of excessive reliance)
- Product and service development/Marketing
- Develop supply chains, including private sector

References:

AITR: Associazione Italiana Turismo Responsabile (Italian Association for Responsible Tourism) - regarding Instruments for successful and responsible tourism:

<http://www.icaroap.coop/UploadFiles/Publications/Davalio%201.ppt#276.21,Slide 21>

Tourism-Protected Area Partnerships in Australia - good models and descriptions for how to choose the right collaborator or partner in the tourism industry: http://researchrepository.murdoch.edu.au/2061/1/tourism_protected_area_partnerships.pdf

Dunira Strategy 2010 - General information on the emerging opportunities for co-operatives in tourism, potential challenges, example case studies: www.dunira.com



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