IUCN
The World Conservation Union

Position Paper

Ecosystems and Livelihoods in CSD15

Energy for sustainable development, industrial development, air pollution/atmosphere & climate change

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The Chairman's draft negotiating document *Policy options and possible actions to expedite implementation in energy for sustainable development, industrial development, air pollution / atmosphere and climate change* aims to further the implementation of intergovernmental agreements including Agenda 21 and the Johannesburg Declaration and Plan of Implementation. The text outlines policy options in the four areas for consideration by the CSD at its 15th Session. IUCN welcomes the list of policy options presented.

IUCN recognises the importance of all four topics on the CSD 15 agenda, and the inter-linkages between them, but focuses on energy for sustainable development. Decisions made today on how to produce, distribute and consume energy will have long-lasting implications for ecosystems and the livelihoods of people that depend on them. As the Fourth Assessment Report of the Intergovernmental Panel on Climate Change's Working Group II has made clear, unmitigated climate change, which is influenced by our current energy choices, will have severe consequences for ecosystems and livelihoods. Biodiversity is also affected by energy choices through direct impacts like habitat loss and fragmentation from energy infrastructure such as well sites, pipelines and electricity transmission wires, and species losses through pollution and collision.

On the other hand, healthy ecosystems provide vital services such as water flows, nutrient cycling and biomass production which underpin energy systems. As ecosystems become degraded, their capacities to deliver such services are undermined and the associated energy infrastructure rendered ineffective. Furthermore, healthy ecosystems buffer against extreme weather events such as hurricanes and floods, protecting energy-related infrastructure such as refineries and ports. These capabilities are undermined as ecosystems are degraded - in part as a result of the direct and indirect impacts of energy systems mentioned above.

The relationships between energy and ecosystems are dynamic as energy patterns shift and ecosystems evolve. Every energy option we consider has associated consequences for ecosystems and livelihoods and the resilience of ecosystems has significant bearing on what energy options are viable in the future.

IUCN encourages the CSD to recognise the inter-linkages between energy, ecosystems and livelihoods. More specifically, the CSD should consider how energy options will affect ecosystems and livelihoods and how ecosystems provide services such as water flows and biomass production which underpin energy systems. Integrated management approaches are needed to ensure that energy policies are a driver rather than a constraint for sustainable development and for achieving the Millennium Development Goals.

From the above perspective, IUCN wishes to bring the following points to the attention of the Commission.

General

IUCN shares the view expressed in the Chairman's document that there are inter-linkages among the four issues in the thematic cluster, and supports measures to harmonise policy options across all four issues. IUCN wishes to highlight that there are inter-linkages between this thematic cluster and other thematic clusters that will be the subject of discussions at future meetings of the CSD. The discussions under the water, sanitation and human settlements (CSD 12 and 13) also link to all four areas in the current cluster. Water flows, improved governance and stakeholder participation in integrated water resource management, and economic valuation and payments for ecosystem services all play an important role in improving the planning and implementation of hydroelectric facilities. Biofuels and biomass for power and cooking should be considered in the context of the upcoming cluster on agriculture, rural development, land, drought, desertification and Africa (CSD 16 and 17). There are further linkages between issues addressed in the CSD process and issues which are the focus of other intergovernmental processes such as the three Rio conventions (the UN Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD), and the Convention to Combat Desertification (UNCCD)).

Energy for Sustainable Development

The report of the Secretary General *Policy options and possible actions to expedite implementation: energy for sustainable development* and the Chairman's document highlight the importance of access to energy for economic and social development and poverty eradication. An estimated 1.6 billion people lack access to electricity and 2 billion depend on biomass to meet their daily energy needs (UNDP, 2005). Women and children pay the price of energy poverty as they travel further from their homes to gather fuel and are more likely to suffer health impacts of indoor air pollution caused by inefficient technologies. Those who lack access to energy have a legitimate right to and need for increased energy services which are affordable, healthier, more reliable, and more sustainable.

The report of the Secretary General calls for tailored policies and strategies for increasing access to energy for impoverished communities and points out that successful programmes to extend grid access have been accompanied by policies that emphasize careful environmental and social assessments.

IUCN supports these findings and would like to highlight that ecosystems provide sustainable sources of energy, but inappropriate energy policies can result in ecosystem degradation, eroding the basis for sustainable livelihoods. Thus when the Chairman's document calls for enhanced investment in the development of the resource base including fossil fuels, biofuels, renewable energy and other sources of energy, ***ecosystems and the services they provide should be considered as part of energy infrastructure and therefore energy policies and strategies should include investment in maintaining them.***

In terms of managing impacts of energy systems on ecosystems, and recalling commitments made under intergovernmental processes such as the Espoo Convention, the CBD, and the Ramsar and Basel conventions, and the commitment outlined in the 2005 World Summit Outcome to protect our natural resource base in support of development[1], ***IUCN encourages strategic and project level assessments of energy policies, projects and technologies*** which:

- consider the ecosystem and livelihood implications of energy options to ensure that they are ecologically sustainable and socially equitable as well as economically viable, as called for in paragraph 9a in the Johannesburg Plan of Implementation[2]
- identify possible changes in ecosystem services under various climate change scenarios and how such changes will affect performance over the full lifespan of infrastructure developments (e.g. water availability for hydro-electric power and cooling nuclear plants)
- consider the greenhouse gas commitments and potential impacts of long-lasting energy infrastructure (e.g. coal-fired power plants).

[1] Paragraph 22g of the 2005 World Summit Outcome which was agreed in the sixtieth session of the General Assembly

[2] Paragraph 9(a) of the Johannesburg Plan of Implementation calls for actions to "Improve access to reliable, affordable, economically viable, socially acceptable and environmentally sound energy services and resources"

Assessments should, in particular, be conducted for:

- mega infrastructure proposals such as those outlined in paragraph 14 of the report of the Secretary General; and
- biofuels projects and policies (including feedstock production) which are referred to in the Chairman's document.

In relation to gender, IUCN is concerned that the Chairman's text does not reflect strongly enough the need for mainstreaming of gender issues into energy policy formulation, planning, and decision-making processes. Particular tools that could be highlighted include:

- strategic investments in capacity building, technical and business training, scientific education and enterprise development for women;
- gender budgets, audits and gender disaggregated data to inform national energy and development policy and implementation strategies; and
- innovative measures that enhance women's access to financing for energy-related equipment and enterprises.

Fossil Fuels

Specifically regarding the consideration of fossil fuel based options and in reference to the term "cleaner fossil fuel technologies" (paragraph 2) put forward in the Chairman's document ***IUCN recommends that the CSD consider rephrasing this to "cleaner fossil fuel technologies and practices" to allow for improved standards of biodiversity management.*** In this regard, IUCN highlights the extensive work that has been done to promote better practice in the oil and gas and mining industries such as the products of the Energy and Biodiversity Initiative (www.theebi.org), the IPIECA *Biodiversity Assessment Plans Guidance* (www.ipieca.org), and the International Council on Mining and Metals *Good Practice Guidance for Mining and Biodiversity* (relevant to the coal industry and to new hydrocarbons such as tar sands and oil shale) (www.icmm.com). Such guidelines go beyond efforts to reduce gas venting and flaring (line 3w of the Chairman's document) and technical assistance to state owned energy enterprises (paragraph 16 of the Secretary General's report) and should be considered a core part of raising the game of fossil fuel extraction companies globally by requiring best practice for managing biodiversity.

Biofuels

Specifically regarding the promotion of biofuels, concerns have been raised about the ecosystem and livelihood implications of poorly planned expansion of biofuels production (e.g. displacement of food production to marginal lands, conversion of biodiversity rich habitat such as tropical forests for feedstock production, erosion of soils and depletion of aquifers from agricultural intensification). Well planned biofuels production can, however, contribute to a more sustainable energy future while providing opportunities for landscape management and rural livelihoods development. Landscape and ecosystem management approaches such as those promoted under the CBD can help ensure that biofuels contribute positively to ecosystems and livelihoods rather than undermine them.

Recalling the call in paragraph 9c of the Johannesburg Plan of Implementation for actions to promote a sustainable use of biomass…through improvement of current patterns of use, such as management of resources,… ***IUCN encourages the CSD to call for the development of a globally relevant set of environmental and social sustainability principles for biofuels.*** In particular, the Roundtable on Sustainable Biofuels (led by École Polytechnique Fédérale de Lausanne (EPFL)), the Global Bioenergy Partnership (initiated by the Gleneagles Dialogue), and the International Biofuels Forum are important processes with which to engage. The principles being developed under these processes should be further strengthened through relevant systems such as certification.

Energy Efficiency

Improving energy efficiency is an important means of achieving more sustainable energy futures and there is a need for developments which make the economics of efficiency investments more sensible for end users***. IUCN encourages the CSD to call for, with urgency, efficiency measures which reduce pressures on ecosystems from energy systems***. Some such measures are highlighted in the Chairman's document such as switching to more efficient stoves and introducing solar and biogas technologies to reduce fuelwood consumption. Measures which have recently been taken to support more energy efficient lighting alternatives and consumer electronics such as Australia's move to ban incandescent bulbs and the European Action Plan for Energy Efficiency are commendable and important to reduce pressures on ecosystems.

IUCN also encourages the CSD to recognize the value of natural systems to improving energy efficiency. Biomimicry, the application of methods and systems found in nature to the study and design of engineering systems and modern technology, can provide useful models for achieving more efficient energy products and systems[3].

Air pollution/atmosphere

The Chairman's notes that air pollution is a major threat to human health and the environment and encourages it to be addressed in an integrated manner at the national, regional and international levels. In terms of indoor air pollution, the Chairman's document encourages fuel switching from traditional biomass to cleaner fuels such as LPG (line 9b). IUCN would like to highlight that improvements in indoor air pollution can also be achieved through the development and adoption of technologies which burn biomass more cleanly and efficiently. **IUCN urges governments to endorse the WHO target put forward at this meeting: 'By 2015, to reduce by half the number of people without access to modern cooking fuels and to make improved cooking technologies widely available.'** The Chairman's document also addresses air pollution from industrial and transportation sources, as well as from desertification, but makes no mention of air pollution from fires. For example, the impacts of forest fires in South East Asia and the accompanying haze pollution during 1997-1998 had an estimated cost of up to ten billion US$ and affected at least 20 million people with 40 000 cases of people being hospitalized with respiratory and other haze-related ailments. That said, IUCN's work on forest fires clearly demonstrates that the underlying causes, such as ill-defined tenure and uncertain use rights, must be addressed in addition to better law enforcement. If the incentives are right, experience has shown that community-managed areas are less prone to catastrophic fires. Finally, the reference to desertification in the document focuses on early warning systems for sand storms (line 9aa), but attention should also be paid to the prevention and reversal of desertification as an effective means of improving people's livelihoods and sequestering modest amounts of carbon. The ongoing review of the strategic plan of the UN Convention to Combat Desertification provides opportunities for better integration of climate change adaptation in activities carried out under the aegis of that Convention.

[3] Termite mounds are being studied for improving building efficiencies (line 3bb) and even eliminating requirements for air conditioning (Architect Mick Pearce collaborated with engineers at Arup Associates to build a mid-rise building in Harare, Zimbabwe that has no air-conditioning, yet stays cool thanks to a termite-inspired ventilation system). Microbes (Cyanobacteria) have inspired a replacement for platinum catalysts in fuel cells (Cedric Tard and Christopher Pickett of the John Innes Centre in the UK). More examples are available at www.biomimicry.org.

Climate change

In light of the findings of the Fourth Assessment Report of IPCC Working Group 1, released in February 2007, IUCN recommends that the first sentence of Paragraph 51 in the Statement should be updated as follows: *We recognize that climate change is a serious and long-term challenge already affecting many parts of the globe and soon to affect al**l***

In order to keep open the long term options for attenuating the pace and impacts of climate change, IUCN urges countries to reduce greenhouse emissions and to move rapidly to negotiating post 2012 commitments to achieve the ultimate objective of the UN Climate Change Framework Convention.

Greenhouse gas emissions from agriculture and managed natural resources will form a progressively larger proportion of total emissions. Limiting emissions from these sources requires changes in land resource management practices that can not simply be achieved through the combination of conservation, efficiency and technology approaches applied to fossil fuel sources. Consequently, IUCN recommends a landscape approach that integrates efforts to reduce emissions from deforestation and degradation, adaptation measures to safeguard agricultural productivity and water supplies, and conservation measures that reduce the vulnerability of ecosystems and the livelihoods of people who depend on them. It further recommends due consideration to these measures in the global discussions on climate change.

If global warming passes critical, but unknown, thresholds, then emissions from unmanaged ecosystems (especially boreal forests, permafrost soils, tropical forests, peat wetlands

and coastal wetlands) have the potential to outweigh the net gain from even the most ambitious mitigation efforts for managed ecosystems and fossil fuels.

Taking into account the severe foreseen impacts of global warming on species and ecosystems and implications on human livelihoods, IUCN places the highest priority on stabilizing global temperatures at 2^{o}C above pre-industrial levels.

Cross-cutting issues

On the cross-cutting issue of financing, IUCN notes the call in the Chairman's document for the removal of environmentally harmful and market distorting subsidies (line 3u), but also notes that such subsidies are called for throughout the rest of the document (lines 3s, 3t, 3v). ***IUCN urges the CSD to go further than the removal of harmful subsidies in energy markets, by identifying ways of internalizing negative externalities associated with energy production, distribution and consumption in the price of energy options.*** For example, the harmful effects of climate change should be reflected in policies which promote a price on greenhouse gas emissions. Biodiversity offsets and payments for ecosystem services are additional mechanisms which should be explored as ways to internalize externalities associated with energy production, distribution and consumption. Such measures would help create a more level playing field for available renewable technologies and would encourage further innovations towards more sustainable technologies.

On the cross-cutting issues of financial support, capacity building and technology transfer, ***IUCN supports the recommendations in the Chairman's document, including for technology transfers which address energy access issues, and encourages that the ecosystem and livelihood consequences of such transfers be identified and addressed.*** Capacity building efforts for improved assessments of energy projects and policies are also critically needed and should be supported by the CSD.