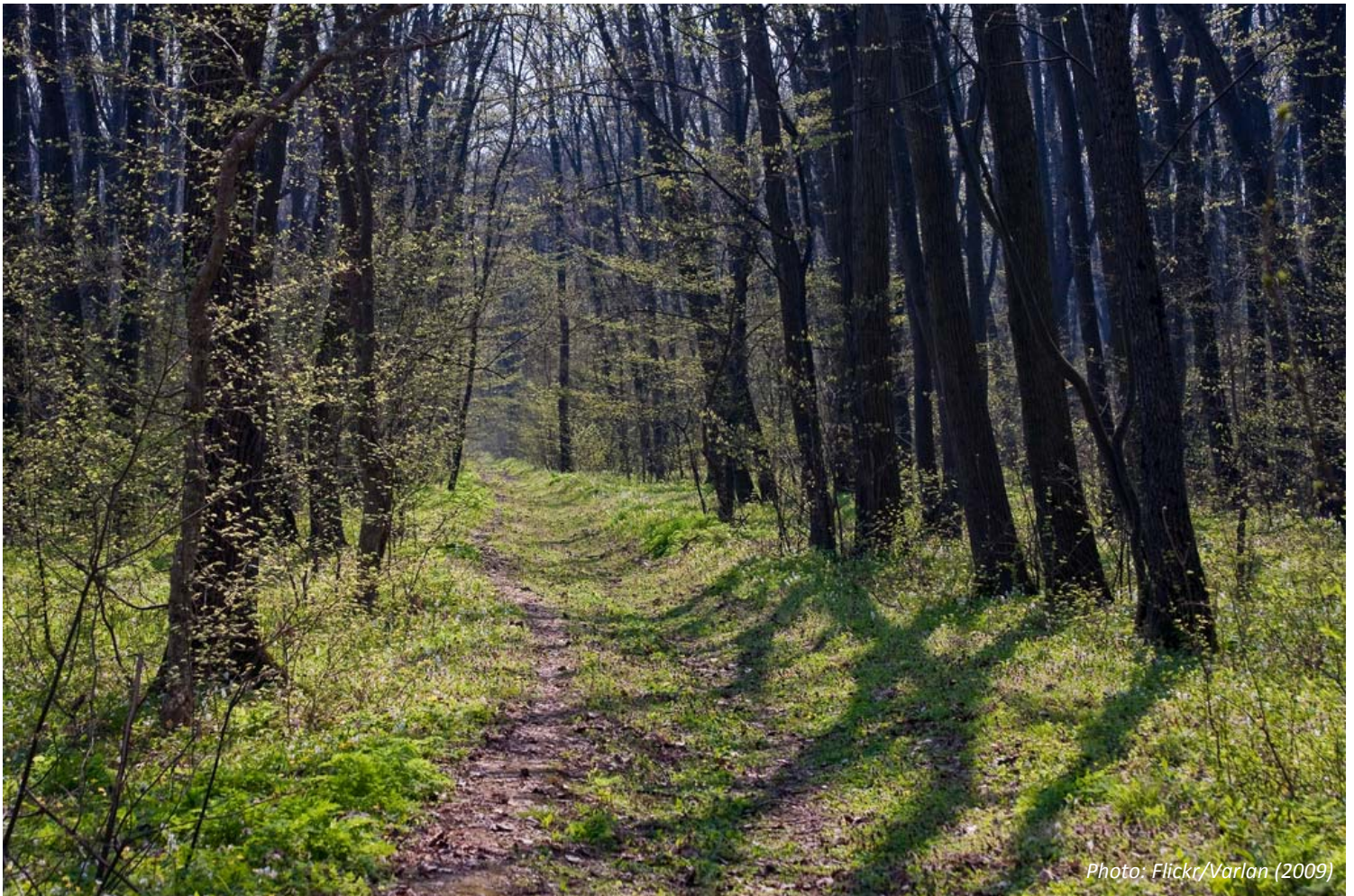




# **IUCN Roadmap on Sustainable Bioenergy Workshop Report**

*22-24 November 2010*

*IUCN Headquarters, Gland, Switzerland*



*Photo: Flickr/Varlan (2009)*

## Introduction

IUCN convened a group of colleagues, Commission members, member organisations and partners to build on previous engagements and guide the future direction of IUCN’s work on biomass-based energy systems. The scope was broad, from global markets for liquid transport fuels to local production and consumption of biomass for heating and cooking.

The workshop was structured in three complementary parts:

1. An internal reflection of IUCN’s bioenergy work and linkages across IUCN;
2. An assessment of bioenergy strategies and learning edges from our external partners as well as the value proposition that IUCN provides; and,
3. An internal discussion on the elements of a bioenergy strategy, including a working vision statement.

This report is a summary of the discussions that took place during the workshop, presenting the main outcomes both generally on bioenergy and then specifically in relation to IUCN. Full details of the discussions are available in the annexes.

In an effort to capture input from those across the Union interested in but unable to attend the workshop, three conference calls were held in webinar format to present workshop outcomes. Minutes from each call are available in Annex 5. Within the Synthesis section, [text in parentheses] reflects relevant input received during these calls.

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## **The time for developing a bioenergy strategy for IUCN is *now*.**

In the opening sessions of the workshop, internal and external participants were asked to list IUCN-related activities and external activities and events related to bioenergy along a timeline (see Annex 1, page 7 for the full timeline). The main trends observed from the timeline include:

- IUCN's work on bioenergy has evolved from traditional forest bioenergy to a current primary focus on biofuels to a future broader focus on all forms of bioenergy (traditional and modern).
- Trend in activities, from assimilating knowledge, convening multi-stakeholder fora, providing platforms for policy engagement, and developing tools and guidance documents.
- An evolution of framing bioenergy within a purely energy context into other relevant and intersecting sectors such as water, agriculture, forestry, sustainable livelihoods, the green economy, social equity and gender.
- Exponential increase in events and activities around the bioenergy issue over the past 5-6 years.
- Development of a bioenergy strategy is very timely given this is likely to increase in the future.

## **Bioenergy is a rapidly evolving sector which requires cross-sector collaboration.**

External participants shared their respective organizational approaches to bioenergy (see Annex 1, page 10 for details). Main areas of overlap with respect to their general visions and approaches for bioenergy include:

- Meeting multiple drivers of GHG emissions reduction, energy security, agricultural and rural economic development.
- Sustainable biomass sourcing is critical for the longevity of this sector, as well as all other biomass- and ecosystem- dependent sectors (e.g. agriculture, forestry).
- Comprehensive and integrated landscape-level planning that protects biodiversity, values ecosystem services, enhances livelihoods, and addresses direct and indirect land use impacts.
- Sustainable resource efficiency from supply, demand and use sides.
- Developing diverse energy portfolios as part of a sustainable energy transition.
- [Sustainable livelihoods: ensuring that bioenergy developments do not undermine local livelihoods but improve them]
- [Stakeholder engagement: emphasising the involvement and needs of local communities, particularly women and men from rural and indigenous communities]
- [Gender: ensuring that gender issues are main-streamed in bioenergy development approaches]
- [Ensuring site-specific (i.e. hectare by hectare) sustainability considerations to determine the best use of biomass while proactively mitigating for environmental and social impacts]

Discussions after these approaches were identified revealed that most time was spent discussing how to balance land use, zoning and who makes those decisions. The most controversial discussions centred on whether biomass is best used for energy at all, or whether higher value uses can be obtained first. More broadly, it was questioned whether any energy source should receive subsidies if this was causing unfair competition between different renewable options [although the definition

of subsidies depends on the system boundaries, e.g. are subsidies for biofuel feedstock considered bioenergy subsidies?].

However, there was consensus on the need for practical implementation of sustainable biofuels given the rapid rate of global production. It was further suggested that the overwhelming consensus in the room around bioenergy meant that some viewpoints went unchallenged (e.g. what is the best use of biomass?). Future discussions should aim to bring a broad diversity of opinions to check in and challenge IUCN's eventual vision and approach.

### **The current big issues for bioenergy include the need for effective land use planning, robust standards and policies, and illustrating sustainable bioenergy success stories.**

Participants shared and discussed some of the key issues being addressed by their organizations (see Annex 1, page 11 for the full list). They can be grouped as:

- Developing comprehensive and integrated land use planning (integrating food, feed, fibre, fuel, forest AND other needs).
- Contributing to effective sustainability standards, tools and guidelines, and ensuring that they have appropriate considerations for biodiversity, water use, land use, ecosystem services, food security and sustainable livelihoods.
- Understanding the viability of “restorative bioenergy” that utilises waste and degraded lands
- Analysing bioenergy policy efficiencies, [asking the right questions] and advising for sound policy development [and application at the appropriate levels of governance]
- Promoting examples of successful sustainable bioenergy projects
- [Understanding the optimal use of biomass in a given situation/context]
- [Incorporating gender issues in the bioenergy context, considering women and men from rural, peri-urban and indigenous communities]
- [How to provide agricultural extension services to assist farmers with implementing sustainable bioenergy feedstock production]
- [Understanding application of carbon credit revenue, and links with REDD+, for bioenergy]

Participants also shared the big issues that are “keeping them up at night” – either with excitement or anxiety! (See Annex 1, page 12 for full list) They can be generally grouped as:

- Implementation of biofuel sustainability policies for meaningful results on the ground, including the role of complementary regulatory and voluntary standards; and broader than biofuels use and production – engaging different groups, e.g. food and agricultural groups.
- General land use issue decisions, including how to incorporate biodiversity, as well as how to say “yes” in practical and useful ways to bioenergy developers.

## **IUCN's role in addressing bioenergy sustainability concerns should include influencing policy, providing practical tools and communicating successful case studies.**

Participants were reminded of the general IUCN value proposition, and how this may relate to bioenergy:

- *Credible knowledge*: evidence-based expertise on a cross-cutting and complex issue.
- *Partnerships for action*: field projects around the world; convening capacity for open discussions between diverse stakeholders in neutral forums; engaging with policy-makers; partnering with business to provide biodiversity advice.
- *Global to local reach*: identifying linkages and synergies between global, regional, and local policy processes, programmes and projects.
- *Standards and practices*: leveraging knowledge across the Union to develop guidelines and inform standards and best practices.

External participants were asked how IUCN can add value to complement their work on bioenergy, building on the big issues identified previously. Suggestions were recorded in the following broad categories of activities (see Annex 1, page 14 for the full list with specific suggested roles).

- Influence policy to ensure sustainable bioenergy is developed
- Promote practical tools for deploying sustainable bioenergy systems
- Inform the business case for adopting standards and effective land use planning
- Create consistent processes for incorporating biodiversity into mapping
- Provide capacity-building for governments on appropriate biodiversity information and processes for mapping and zoning in landscapes
- Publish case studies that show what works/doesn't work and why
- Communicate bioenergy solutions across the Union

These were subsequently grouped into potential complementary areas for IUCN activities to focus around (see table on next page).

## **Developing a coherent and complementary vision for IUCN on bioenergy**

Finally, based on all the input received, IUCN colleagues were in a position to develop a vision for IUCN on bioenergy. This was deemed important to act in the near future in a coherent and consistent manner. This will help frame the strategy which will guide our work up to the next Congress in 2012. Based on inputs throughout the workshop, the working vision that IUCN colleagues came up with is:

***“By 2016, bioenergy responsibly contributes to biodiversity conservation, climate change solutions and sustainable livelihoods, as part of resilient ecological and socio-economic systems.”<sup>1</sup>***

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<sup>1</sup> For consideration: 2016 was listed for the vision to serve as immediate guidance for IUCN's work over the next 5 years; 'as part of resilient...systems' is used with the understanding that resilient systems will need to be maintained, enhanced and/or built, depending on the situation; main terms will be defined fully in the bioenergy strategy; and, ensure that social equity (including the gender aspect) is captured within the vision.



## Next Steps

- Bioenergy strategy development commences at HQ in March 2011
- Draft strategy shared across the Union for feedback by April 2011
- Begin compiling collaborative project proposals for new activities, based on all workshop-related input (see table below), potentially commencing some projects in 2011.

<b>Bioenergy work area/result</b>	<b>Potential activities</b>	<b>Potential partners*</b>
1. Biodiversity information/mapping	<ul style="list-style-type: none"> <li>• Facilitate consensus on consistent biodiversity criteria for bioenergy mapping and use in planning (important to consider scale-dependence: e.g. there is a need for higher resolutions at smaller scales)</li> <li>• Policy gap analysis, guidelines for ministries, and other appropriate levels of governance</li> <li>• Data collection guidelines for SSC networks</li> <li>• Communication around IBAT developed for biofuel producers and/or ministries</li> <li>• Local and indigenous community considerations in mapping processes</li> </ul>	Must involve policy makers! SSC/WCPA, IBAT, UNEP
2. Influencing decision-making that affects land use planning	<ul style="list-style-type: none"> <li>• Capacity building (including guidance/toolkit) for governments on bioenergy mapping and zoning, taking into account social and environmental issues, for real results on the ground;</li> <li>• Policy gap analysis for land-use planning, engage beyond bioenergy – include agriculture and forestry;</li> <li>• Engage financial sector that invests in the bioenergy sector to ensure sustainability safeguards are incorporated in business planning</li> <li>• Build on IUCN land use consulting work in Mozambique, as presented by Regina from IUCN Mozambique office.</li> </ul>	Needs to include IUCN government members, UNEP, FAO
3. Implementation of bioenergy practices/ standards that can ensure sustainability on the ground	<ul style="list-style-type: none"> <li>• Restoration guidelines, corridor management for plantations, social safeguards, highlight best practice case studies;</li> <li>• Policy gap analysis on biofuel standards</li> </ul>	High Conservation Value resource network; CI/WWF (linked to Responsible Cultivation Area pilots);
4. Monitoring outcomes, to make informed decisions around land use planning	<ul style="list-style-type: none"> <li>• Develop criteria to be able to assess biodiversity outcomes and results (beyond current process indicators)</li> <li>• Ensure gender issues are monitored</li> </ul>	SSC; IUCN Business & Biodiversity Programme (links to Holcim, Rio Tinto and Nespresso projects); Energia

\*Participants all made respective commitments to support different activities. These are also summarized in the activities table. If others are interested to engage in particular work areas, they are requested to contact [Deviah.Aiama@iucn.org](mailto:Deviah.Aiama@iucn.org)

### Workshop Rationale

Over the last five years, IUCN has built up a programme of work primarily around biofuel policies and standards setting, guided by resolutions 4.082 Sustainable biomass-based energy and 4.083 Industrial agrofuel production. IUCN’s experience with local biomass-based energy systems has an even longer history, in relation to forest landscape management and conservation.

Building on existing experience and expertise in IUCN’s networks is critically important in the process of developing a strategy for future engagement. To guide the future direction of IUCN’s work on biomass-based energy systems the energy team in IUCN convened a group of IUCN colleagues and partners, including representatives from:

- IUCN regional and national offices (Europe and Mozambique, with inputs received from South America and West and Central Africa regional offices)
- IUCN global thematic programmes
- IUCN Commissions (CEL, CEESP)
- Members (Conservation International, IUCN National Committee of the Netherlands, Wetlands International, WWF)
- Partners (HCV Network, Roundtable on Sustainable Biofuels, Shell, United Nations Environment Programme, Universidade de Evora)

The workshop agenda consisted of an internal reflection of IUCN’s bioenergy work on day 1, an assessment of bioenergy strategies and learning edges from our external partners on day 2, and an internal discussion on the elements of a bioenergy strategy on day 3. This background information summarises group and plenary discussions during the three days.

### Day 1 (Internal)

#### Session 2: The Story of IUCN and Bioenergy

Participants were asked to list IUCN-related activities and external events related to bioenergy along a timeline. These included key IUCN Resolutions/Recommendations, Congress-related events, publications, projects, activities in external networks, and by members, as well as key global events. The intent was to have an indication of various influencing points in time for the global bioenergy agenda, not a comprehensive listing. On Day 2, external colleagues were invited to add to the timeline. The table below captures key events listed by IUCN and external colleagues.

**Table 1.** Bioenergy timeline

<i>IUCN-related events</i>	<i>Key external events</i>
<i>Pre-2004</i>	
<ul style="list-style-type: none"> <li>- Charcoal and fuel wood from forests</li> <li>- 1975: Resolution 12 “Energy and conservation”</li> <li>- 2002: WCPA, Nigel Dudley, paper on biofuels and biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>- 1993: FSC certification established</li> <li>- 1998-99: eco-agriculture planning</li> <li>- 2002-2004: Rural energy re-investment programs (Eastern Europe, Russia)</li> </ul>

<i>IUCN-related events</i>	<i>Key external events</i>
<b>2005</b>	
<ul style="list-style-type: none"> <li>- Energy scoping paper</li> </ul>	<ul style="list-style-type: none"> <li>- EU Renewable Energy Directive</li> <li>- US Renewable Fuel Standard</li> <li>- WTO agriculture subsidy discussions</li> </ul>
<b>2006</b>	
<ul style="list-style-type: none"> <li>- UNEP governing council paper</li> <li>- 2006-2008: International risk governance council, guidance for risk management (Jeff McNeely)</li> </ul>	<ul style="list-style-type: none"> <li>- UK, Germany, Netherlands introduce sustainability standards for biofuels</li> <li>- Biofuels use and national plan for energy efficiency in Portugal</li> </ul>
<b>2007</b>	
<ul style="list-style-type: none"> <li>- IUCN side-event on biofuels at UN Commission on Sustainable Development</li> <li>- Bill Jackson (DDG) met Mozambique Environment Ministry on biofuels</li> <li>- IUCN publication: Compilation of conservation tools for sustainable bioenergy</li> <li>- Roundtable on Sustainable Biofuels created, IUCN is Chair of Environment Group</li> <li>- IUCN becomes a member of the steering Committee of the Global Gender and Climate Alliance (GGCA)</li> </ul>	<ul style="list-style-type: none"> <li>- Brazil: social seal program for biodiesel</li> <li>- Brazil: biofuels law (Energy portfolio)</li> <li>- Tanzania: biofuels from jatropha</li> <li>- Netherlands: Cramer commission report on biofuels sustainability criteria</li> <li>- EU public consultation on biofuels sustainability (IUCN submits position)</li> </ul>
<b>2008</b>	
<ul style="list-style-type: none"> <li>- IUCN publication: Invasive species guidelines for biofuels</li> <li>- Shell-IUCN planning workshop</li> <li>- 2008-2011: IUCN Oceania energy projects, including copra use for bioenergy</li> <li>- Resolutions 4.082 (sustainable biomass-based energy) and 4.083 (sustainability safeguards for industrial agrofuel production)</li> </ul>	<ul style="list-style-type: none"> <li>- Global food price hikes</li> <li>- UK: RTFO reporting requirements for biofuels</li> <li>- Publications: Gallagher review, GHG emissions and biodiversity impacts from indirect land use change (ILUC)</li> <li>- Version 1 of RSB Standard</li> <li>- California: Low Carbon Fuel Standard</li> <li>- Brazil: sugarcane mapping and zoning</li> <li>- RSPO certification starts for palm oil</li> <li>- UNEP bioenergy issue papers</li> </ul>
<b>2009</b>	
<ul style="list-style-type: none"> <li>- Shell-IUCN workshop on barriers to sustainable biofuels</li> <li>- World Water Forum, biofuels workshop</li> <li>- Energia/IUCN, bioenergy and gender case studies in India, South Africa, Cambodia, Ghana, Nepal, Sri Lanka, Uganda, Zimbabwe</li> </ul>	<ul style="list-style-type: none"> <li>- EU Renewable Energy Directive adopted and RED certification systems launched</li> <li>- US Renewable Fuels Standard 2</li> <li>- Mozambique: national biofuel policy</li> <li>- Sierra Leone: local zoning for biofuels</li> <li>- 2009-2010: Responsible Cultivation</li> </ul>



<i>IUCN-related events</i>	<i>Key external events</i>
<ul style="list-style-type: none"> <li>- IUCN, ENERGIA, WEDO and other members of GGCA undertook activities to mainstream gender in COP 13</li> <li>- UNEP report on water and biofuels</li> <li>- 2009-2010: EU project (with Ecofys), grasslands project, guidelines for economic operations</li> <li>- 2009-10: Ramsar, biofuels-wetlands TF</li> <li>- 2009-10: IUCN hosts gender energy and climate change trainings in collaboration with ENERGIA</li> </ul>	<p>Areas work</p>
<b>2010</b>	
<ul style="list-style-type: none"> <li>- Shell-IUCN with Packard and Proforest: biofuels standards workshop</li> <li>- CBD SBSTTA side-event (IUCN HQ, ESARO, CI, WWF)</li> <li>- CBD COP 10 side-event on biofuels (IUCN HQ, CI, RSB, UNEP, WWF)</li> <li>- UK's ESPA proposal on biomass energy</li> <li>- CI + TNC work on water, biofuels, E-flows</li> <li>- UNEP mapping for biofuels</li> <li>- Shell-IUCN iLUC workshop</li> <li>- IPIECA workshop on water and biofuels: water programme invited to speak on governance</li> <li>- Currently in Mozambique: zoning advice for biodiverse areas and biofuels planning, climate change adaptation (MDGs), LLS: reduce charcoal needs of communities</li> <li>- Sustainable agricultural work as it intersects with bioenergy feedstock (BBP)</li> <li>- Pacific Energy and Gender Network with support from ENERGIA, conducts gender assessment &amp; gender training for five SIDS IUCN Energy Projects located in Tonga, Samoa, Vanuatu, Palau and Tuvalu resulting in the development of the gender action plans for each of the SIDS IUCN Energy Projects.</li> </ul>	<ul style="list-style-type: none"> <li>- Brazil: Shell + Cosan joint venture</li> <li>- UNEP workshop on methodology for agro-environmental zoning for biofuels</li> <li>- Version 2 of RSB standard</li> <li>- ISO process committee 248 bioenergy</li> <li>- RTRS standards P+C certification starts</li> <li>- EU iLUC public consultation (IUCN submits position)</li> <li>- EU RED implementation</li> <li>- BSI certification starts</li> <li>- GBEP indicators published</li> <li>- UNEP, Resource Panel Assessing Biofuels report (Jeff McNeely)</li> <li>- UNEP/FAO bioenergy support tool</li> <li>- Paraguay: oil palm mapping and zoning</li> </ul>

Trends observed from the timeline mapping process included:

- Exponential increase in events and activities around the bioenergy issue over the past 6-7 years
- Development of a bioenergy strategy is timely given this increase will continue
- An evolution of framing bioenergy within a purely energy context into other relevant and intersecting sectors such as water, agriculture, forestry, sustainable livelihoods , the green economy, social equity and gender.

- IUCN’s work on bioenergy has evolved from traditional forest bioenergy to a current primary focus on biofuels to a future broader focus on all forms of bioenergy (traditional and modern)

### **Session 3: Bioenergy - The Bigger Picture**

Following the timeline creation, Andrea Athanas (Senior Programme Officer, IUCN HQ/BBP) presented on the bigger picture of bioenergy in terms of where this sector is heading in the near future and key influential issues. Strategic land-use planning for all ecosystem-dependent sectors will be a crucial need moving forward. The bioenergy sector could serve as a model sector adopting responsible approaches for sustainable biomass extraction, while contributing to the resilience of socio-ecological systems. IUCN’s recent video<sup>2</sup> on indirect land use change was screened to the participants in this context.

In the concluding session of the first day, participants were asked to reflect on the future of IUCN in the emerging bioenergy future: given what’s been done so far what role should IUCN be playing, and where could other IUCN programmes potentially intersect with bioenergy?

- *IUCN’s role in the bioenergy future:*
  - Leveraging credible knowledge from across the Union to influence governments, industry and other stakeholders to make sustainable bioenergy choices.
  - Providing governments with objective policy advice based on evidence-based expertise, including consistent advice on key biodiversity areas to policy and project processes, with consideration for under-represented voices.
  - Making IUCN the authoritative voice on robust land use planning approaches for bioenergy and beyond.
  - Making the linkages and identifying the synergies between climate change, water use, land use, agriculture, forestry, sustainable livelihoods, green economy and bioenergy in international policy processes and through cross-linkages across IUCN programmes of work.
  - Capacity-building for knowledge deployment in the field (small to large scales); and learning from field experience about what works and what doesn’t.
  - Convening neutral forums for multi-sector discussions on cross-cutting issues such as bioenergy.
- *IUCN programmatic activities potentially intersecting with bioenergy:*
  - Water: tailor environmental flow guidelines to large and small producers (e.g. best practices, suitable crops), create awareness of water issues for bioenergy producers and policy-makers.
  - Livelihoods, food security and green economy: choosing sustainable bioenergy choices, where applicable, for livelihood improvement and improved clean energy access without impacting food security.
  - Forestry and agriculture: improving production and use efficiencies of traditional and modern bioenergy feedstocks to reduce ecosystem degradation.
  - Climate change mitigation: ensuring bioenergy delivers GHG reductions

<sup>2</sup> <http://www.youtube.com/watch?v=IDFwNTJ8ppE>

- Restoration: role of bioenergy feedstocks in restoring degraded landscapes.
- Marine ecosystems: monitor potential seascape impacts from aquatic bioenergy sources such as algae.
- Species: monitoring for invasive species being used as bioenergy feedstocks.
- Resilience: the role of bioenergy in a socio-ecologically resilient future.

## **Day 2 (Internal & External)**

### **Session 2: Institutional Visions of Bioenergy**

Following introductions and summarizing proceedings of day 1 for our external colleagues, we discussed their institutional approaches to bioenergy in terms of visions, key issues, and main actors involved. A summary of the general patterns that emerged (detailed write-ups of the respective discussions are available upon request):

- *Key components of visions/approaches:*
  - Meeting multiple drivers of GHG reduction, energy security, agricultural and rural economic development;
  - Sustainable biomass sourcing is critical for the longevity of the sector;
  - Resource efficiency on both the production and use sides;
  - Economic scenarios of new biomass uses;
  - Diverse energy portfolios as part of a sustainable energy transition;
  - Landscape-level planning;
  - Rural development, including South-South collaboration; and,
  - Improving clean energy access.
  
- *Key issues being addressed:*
  - Optimising trade-offs between multiple uses of biomass and land;
  - Mitigating indirect land use change;
  - Viability of using waste and degraded lands;
  - Developing comprehensive land use planning and land tenure regimes;
  - Contributing to effective sustainability standards, tools and guidelines;
  - Ensuring consideration for water, biodiversity and ecosystem services (including PES);
  - Analysing demand and use efficiency;
  - Understanding North-South relations around biofuels;
  - Analysing bioenergy policy efficiencies and advising for sound policy development; and,
  - Highlighting examples of successful sustainable bioenergy projects.
  
- *Main actors:* local communities, small holder farmers, NGOs/civil society, industry, standards and certification schemes, investors, academia, governments, international institutions and policy processes.

In plenary afterwards, the groups revealed that most time was spent discussing how to balance land-use, zoning and who makes those decisions.

The most controversial discussions centred on whether biomass is best used for energy at all, or whether higher use values can be obtained first, as well as whether the current bioenergy targets make sense. More broadly, it was questioned whether any energy source should receive subsidies if this was causing competition between different renewable options.

However, there was a lot of consensus between the groups on the need for practical implementation of sustainable biofuels. It was further suggested that the overwhelming consensus in the room was not necessarily positive as some viewpoints went unchallenged. Future discussions should aim to bring a broad diversity of opinions to check in and challenge IUCN's eventual vision and approach.

### **Session 3: Bioenergy Learning Edges (or “What’s keeping you up at night issues”, either with excitement or anxiety, about bioenergy)**

Participants were invited to introduce and lead discussions around the biggest issues and questions companies and organizations are dealing with in the bioenergy field, or pressing issues that participants thought should be addressed in the context of bioenergy. The table below captures the questions posed and the take away messages from the discussions.

As can be seen from table 2, the issues were either specific to biofuels, or broader.

- Implementation of biofuel sustainability policies, including enforcement of standards; and broader than biofuels use and production – engaging different groups, e.g. food and agricultural groups.
- General land-use issues, e.g. including how to incorporate biodiversity as well as being positive rather than negative (e.g. avoid no-go areas).

**Table 2.** Bioenergy learning edges

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#### **Biofuels**

➤ ***What are the key barriers and challenges for the implementation of sustainable biofuels on the ground, at the scale and speed needed?***

- Barriers: inappropriate land-use planning decisions, inadequate legal frameworks and enforcement, inefficient financial incentives or lack thereof.
- Solutions: IUCN has experience in developing principles to fast track land use decisions that can assist with land use planning; to be effective, it should be on a regional or country basis.

➤ ***How can there be real enforcement of biofuels standards?***

- Certification has other values beyond policy enforcement: it can voluntarily drive better practices and standards.
- Policy could recognize sustainability standards by providing economic incentives such as tax

benefits or drawbacks.

➤ ***Can biofuels production be increased without causing unwanted land-use changes? How?***

- Technically we can at current levels of demand.
- We need the proper policy framework and market incentives in place to guide responsible land use.

➤ ***GMOs for biofuels***

- Background: issue was raised by the IUCN South American office as a key sustainability issue in their region. It currently is mainly an issue for soy production, but corn and sugarcane feedstocks are also implicated. In the future, with more advanced biofuels, it is an issue for cellulosic (e.g. GM poplar trees with reduced lignin in China, GM eucalyptus in New Zealand) and algal-based biofuels.
- The GMO issue with regard to biofuel production is similar to the broader GMO food discussion with 2 exceptions: feedstock not destined for human consumption, and, different plants and applications are affected.
- Current tools and approaches are relevant for GM biofuels and should be enforced.
- Action for IUCN: keep a watching brief, particularly with regard to the testing and implementation of advanced biofuels.

➤ ***How can we talk to people we don't usually talk to in the biofuels sector?***

- Need to broaden the base of stakeholders who are directly involved in these discussions, for example the agricultural sector. It needs to be a constructive engagement aimed at solving problems.
- Much discussion surrounded the “silent majority” of other biofuels producers, who are not engaged in discussions like these. Blenders rely on producers to implement sustainability standards. The producers rarely get an audience. Reasons for this include: they are geographically dispersed; they can be threatened by NGOs, who might launch negative campaigns against them. The question needs to be asked: what's in it for them and how do we assist them to meet the desired sustainability objectives?
- Engaging with growers would also bring more credibility when talking to decision makers. The IUCN network could be valuable in reaching out to new stakeholders.
- We must focus on moving the debate forward, demonstrating results, creating value.

➤ ***Is it feasible to take the “fuel vs. food” debate to the next level “what kind of food vs. what kind of fuel” (e.g. junk food, fodder, staple)?***

- An extremely complex issue. It should be brought into a larger debate about better living, which would involve less meat, junk food, cleaner energy, and so on.
- Communication is key. Get influential people spreading the word for practical incentives (e.g. consuming less meat could result in cheaper gasoline).

## Land Use Issues

### ➤ ***How can we make land-use planning work in practice?***

- Inform the business case for land-use planning
- Use best practice examples to develop effective criteria (e.g. UNEP) for land-use planning. If a country proves it has developed a sound process (although proving this will be complex, can UNEP play a role?), then enable market opportunities and access to financing.

### ➤ ***How do we reach agreement on biodiversity priority criteria and maps?***

- The HCV (High Conservation Value) network provides a reasonably consistent framework and is used by several biofuel feedstock standards, so build on that (tools, training, maps).
- There are currently too many maps, with too little government support. Industry needs a clearing-house for maps, and guidance to match expectations of biodiversity considerations.

### ➤ ***How do we get more out of landscapes (including energy) while actually restoring ecosystems?***

- There are real opportunities in both current and future feedstock and supply chain options
- There are also real barriers: costs are immediate, tangible and currently borne by producers.
- Benefits are indirect and intangible. We must find way to incentivize “restorative bioenergy”.

### ➤ ***How can we start to say YES in a practical, useful way, to bioenergy decision makers?***

- In the context of land-use/agriculture/forestry: we need to have a broader framework for being able to say “yes” to land uses.
- Must build on existing processes that enable responsible behaviour: e.g. RCA process and RSB standard. Identify synergies between multiple sectors.
- Share case studies that are transparent on what they achieved and what they didn’t (e.g. supporting small holders, ecosystem restoration). Be realistic and practical with requirements and expectations.

### ➤ ***How do we meet all food, feed, fuel, fibre, and forest demands sustainably in 2050?***

- Will need to move from assessing trade-offs between multiple provisioning in landscapes to creating synergies between different land uses and components of the value chains.
- We have to work with all stakeholders involved in the complete value chain.

### ➤ ***How to deal with scientific uncertainty (e.g. iLUC)?***

- Implement Best Management Practices known to reduce risks and uncertainty.
- Implications depend on the scale of scientific analysis: global vs. local.
- Develop dynamic policy that allows for adaptation when new evidence is observed.



## Session 4: Where can IUCN best add value to complement and strengthen this community of bioenergy practitioners?

Following a snapshot of IUCN's work on bioenergy so far, and the value proposition that IUCN offers (credible knowledge, partnerships for action, global to local reach, advising standards and best practices, and the strength of collaboration across the Union), external participants were asked how IUCN can add value to support their work on bioenergy, building on the big issues identified previously. The table below is a record of suggestions, broadly categorised into activities.

**Table 3.** Potential value-addition activities for IUCN on bioenergy

<b>1. INFLUENCE POLICY TO ENSURE SUSTAINABLE BIOENERGY IS DEVELOPED</b>
<ul style="list-style-type: none"><li>- Advise bioenergy policy in the context of the transition to broader sustainable energy systems in terms of supply, demand, use and efficiencies.</li><li>- Advocate for biofuels policies to recognize sustainability standards and best practices.</li><li>- Advocate for innovative and effective policy development.</li><li>- Advocate for market-based solutions where applicable.</li><li>- Advise for linkages and synergies across the value chain.</li></ul>
<b>2. PROMOTE PRACTICAL TOOLS FOR DEPLOYING SUSTAINABLE BIOENERGY SYSTEMS</b>
<ul style="list-style-type: none"><li>- Leverage field-based learning for promoting tools that are useful to producers</li><li>- Advise current standards and their implementation</li><li>- Mediate conflicting interests towards equitable and more balanced outcomes</li></ul>
<b>3. INFORM THE BUSINESS CASE FOR ADOPTING STANDARDS &amp; CONTRIBUTING TO EFFECTIVE LAND USE PLANNING PROCESSES</b>
<ul style="list-style-type: none"><li>- Inform the private sector on the long-term value of adopting sustainability standards, certification systems and best practices (that include biodiversity and ecosystem considerations) to ensure that they are factored into their business case planning.</li><li>- Inform the private sector of the value of consultative land use planning for bioenergy producers</li><li>- This is likely best done in partnership with standards organizations (e.g. RSB)</li></ul>
<b>4. CREATE CONSISTENT PROCESSES FOR INCORPORATING BIODIVERSITY INTO MAPPING</b>
<ul style="list-style-type: none"><li>- Help key producer countries to implement effective biodiversity mapping and zoning</li><li>- Facilitate debate and consensus on biodiversity criteria for mapping</li><li>- Define and enable consistent definitions and methodology for site selection</li></ul>
<b>5. CAPACITY BUILDING FOR COUNTRIES ON MAPPING/ ZONING IN LANDSCAPES</b>
<ul style="list-style-type: none"><li>- Target a few key countries and advise on practical land-use planning approaches.</li><li>- Facilitate mapping linked to bioenergy and agriculture standards and certification schemes.</li><li>- Adapt IUCN's landscape planning principles for synergies between sectors.</li><li>- Convene members and partners to design and implement mapping training for governments, producers, and civil society in key countries.</li></ul>

## **6. PUBLISH CASE STUDIES THAT SHOW WHAT WORKS/DOESN'T WORK AND WHY**

- Case studies of positive success stories of bioenergy projects across the Union.
- Case studies of best practices for site selection through effective land use planning.
- Case studies of restorative bioenergy systems: do they exist, barriers and solutions, contributions to risk management and resilience.

## **7. COMMUNICATE BIOENERGY SOLUTIONS ACROSS THE UNION**

- Compile a complete picture of ongoing bioenergy research and projects.
- Compile practical tools, methodologies and guidelines for sustainable bioenergy development.
- Create incentives for engaging new and non-traditional partners: farmers, policy-makers.
- Convene a communications group to develop supporting messages to various targets.
- Use the strength of the IUCN network to bridge the gaps (e.g. private sector and civil society, South-North interactions, large and small stakeholders, top-down and bottom-up processes)
- Collaborate with universities to leverage the latest science and knowledge for solutions.

### **Day 3 (Internal)**

#### **Session 1: Discussion and Prioritization of Proposed Activities**

Following a recap of the first two days for new internal participants on day 3, participants were asked to informally prioritize the proposed IUCN activities that had been identified the previous day. Case studies of success stories and to fill knowledge gaps, developing practical tools and ensuring consistent biodiversity criteria for mapping were given top priorities as was a new suggestion of considering the positive and negative impacts of bioenergy upon biodiversity. The full list, in order of quick/preliminary prioritization:

- Case studies development (filling knowledge gaps, highlighting success stories)
- Impact study of bioenergy on biodiversity (positive and negative)
- Consistent biodiversity criteria for land use mapping
- Tools development: planning, operational, dialogue tools
- Communication (including “old” and “new”)
- Business and government case for biodiversity considerations in bioenergy development
- Capacity-building for sustainable bioenergy development
- IUCN’s message on bioenergy
- Understanding the drivers: climate change mitigation, energy security, rural development
- Understanding the socio-economic aspects of bioenergy development
- Policy influence and identifying synergies between related policy processes
- Frontier scoping, new partners, new synergies (e.g. utilizing waste, restoring landscapes)
- Role and use of scientific knowledge, knowledge leveraging, knowledge exchange
- Facilitating multi-stakeholder and multi-sector dialogues

## Session 2: Elements of a Bioenergy Vision and Strategic Process

In order to guide the direction of the activities identified during day 2 and prioritized on day 3, participants were asked to develop a working vision statement on bioenergy for IUCN. Participants felt that assigning a time period of 5 years to the vision would provide more immediate guidance to begin its achievement. A ‘snowball technique’ was used for the vision development, where four small groups created their individual visions, then two combined to create a shared vision, and these two larger groups combined to create one shared vision for the entire group. The final working vision is:

*“By 2016, bioenergy responsibly contributes to biodiversity conservation, climate change solutions and sustainable livelihoods, as part of resilient ecological and socio-economic systems.”*

We are calling this a “working” vision as this will now be tested with other colleagues and members in IUCN before forming the basis of the IUCN strategy for bioenergy. There was active discussion around the need to define the terms in the vision, and whether resilient systems currently exist or need to be built – this is situation-specific as natural ecosystems are generally resilient to begin with, whereas modified ecosystems may not be. Therefore ‘as part of building’ was replaced with ‘as part of’ with the understanding that resilient systems will need to be maintained, enhanced or built.

## Session 3: Conditions to Make the Bioenergy Road Map Successful

Equipped with a vision statement and prioritized activities for IUCN, participants were asked what conditions are required in order to make the bioenergy road map successful at IUCN.

**Table 4.** Success Conditions for IUCN’s Bioenergy Road Map

✓ <b>Recognition</b>
• Broad Union-wide acceptance of the vision statement, including actively reaching out to Commissions, members and partners
✓ <b>Synergies</b>
• Build on and leverage existing initiatives or events related to bioenergy
✓ <b>New Collaborations</b>
• Initiate new link/collaborations with sectors across the Union that intersect with bioenergy
✓ <b>Integration</b>
• Contribute to the process of strategic programmatic integration for IUCN
✓ <b>Field Experience and Learning</b>
• Bridge with experience on the ground to improve understanding of the practical issues
✓ <b>Landscape-Scale Lens</b>
• Ensure contributions to advancing landscape-scale solutions incorporate integrate of natural resource management (biodiversity, ecosystems, agriculture, forestry, development)
✓ <b>Diverse Pathways</b>
• Recognize there isn’t only one possible pathway in light of different environmental, socio-economic needs and realities around the world
✓ <b>Engage Key Decision-Makers</b>
• Identify links with key decisions-makers that need to be influenced (e.g. government, private

sector)

✓ **Create Products**

- Have a concrete “thing” that the Union can contribute to ( e.g. publications)

✓ **Communicate**

- Effective and extensive communication internally and externally

✓ **Timeliness**

- Start to implement the strategy as soon as possible

✓ **Resource Availability**

- Financial and human resources, time.

## **Concluding Remarks**

The participants were thanked profusely for sharing their time and wisdom to shape IUCN’s vision and strategy on bioenergy. The organisers identified the next steps, including the circulation of the report for comment, a series of conference calls reaching out to those across the Union who were interested but unable to attend, and to follow up on specific activities that were identified throughout.

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## Annex 2: Workshop Agenda

### Day 1: IUCN participants

Time	Event	Content	Facilitator/ Chair
13:30	<i>Session 1</i> <b>Welcome and Introduction to the Workshop</b>  <i>(Main Conference Room)</i>	<ul style="list-style-type: none"> <li>Welcoming Remarks, Context, <b>Juan-Marco Alvarez, Director, BBP</b></li> <li>Goals of the workshop and key outcomes, <b>Nadine McCormick, Energy Network Coordinator</b></li> <li>Schedule, methodology, safety and participants introductions, <b>Gillian Martin Mehers, Facilitator, Bright Green Learning</b></li> </ul>	Juan-Marco Alvarez  Nadine McCormick  Gillian Martin Mehers
14:30	<i>Session 2</i> <b>The Story of IUCN and Bioenergy Thus Far and The Bigger Picture</b>  <i>(Main Conference Room)</i>	<ul style="list-style-type: none"> <li>Creating the story of IUCN and Bioenergy.</li> <li>Presentation - Bioenergy: Where is this field heading? What will influence it and how are key actors responding? <b>Andrea Athanas, IUCN</b></li> <li>Questions</li> </ul>	Andrea Athanas  Gillian Martin Mehers
15:45	<b>Coffee Break</b>		
16:00	<i>Session 3</i> <b>Reflections and Planning for Day 2</b>  <i>(Main Conference Room)</i>	<ul style="list-style-type: none"> <li>Discussion: <b>What is the future of IUCN within this broader bioenergy future?</b> Given what IUCN has done, what kinds of things should IUCN be doing? Where does your Programme intersect with bioenergy in the future?</li> <li>Briefing Day 2 and Announcements: Evening dinner arrangements.</li> </ul>	Gillian Martin Mehers
17:00	<b>Wrap-Up of Part I of Workshop End of the Day</b>	End of the day.	
18:30	Depart for Restaurant	Depart from venue to restaurant.	Bus service
19:00	<b>Group Dinner</b>	Participants are cordially invited to a dinner at <i>Croix Verte</i> restaurant in Nyon.	

### Day 2: External participants with IUCN participants

Time	Event	Content	Facilitator/ Chair
09:00	<i>Session 1</i> <b>Welcome and Introduction to the Workshop</b>  <i>(Main Conference Room)</i>	<ul style="list-style-type: none"> <li>Welcoming Remarks, Context, <b>Juan-Marco Alvarez, Director, BBP</b></li> <li>Goals of the workshop and key outcomes, <b>Nadine McCormick, Energy Network Coordinator</b></li> <li>Schedule, methodology, and participants introductions, <b>Gillian Martin Mehers, Facilitator, Bright Green Learning</b></li> <li><b>Speed Meeting:</b> Story of IUCN and</li> </ul>	Juan Marco Alvarez  Nadine McCormick  Gillian Martin Mehers

		Bioenergy thus far.	
10:15	<b>Coffee Break</b>		
10:30	<i>Session 2</i> <b>Institutional Visions of Bioenergy</b>  <i>(Main Conference Room)</i>	<ul style="list-style-type: none"> <li>• Table discussions: Bioenergy visions exchange. Institution's visions or approach for their Bioenergy work.</li> <li>• Group work: What patterns did we see in the visions? What are the key issues being covered?</li> <li>• Presentation of highlights and discussion.</li> </ul>	Gillian Martin Mehers
12:30	<b>Lunch</b>		
13:30	<i>Session 3</i> <b>Bioenergy Learning Edges: What's Keeping Us Up At Night?</b>  <i>(Main Conference Room)</i>	<ul style="list-style-type: none"> <li>• Open Space Discussion: <b>What are some of the biggest issues and biggest questions companies and organizations are dealing with in the bioenergy field?</b> Hosted parallel thematic discussions, followed by a plenary session identifying key take aways.</li> </ul>	Gillian Martin Mehers
15:30	<b>Coffee break</b>		
15:45	<i>Session 4</i> <b>Contributing to IUCN's Bioenergy Strategy: Where Can IUCN Best Add Value, Complement and Strengthen</b>  <i>(Main Conference Room)</i>	<ul style="list-style-type: none"> <li>• Reminder of IUCN's bioenergy work thus far, <b>Dev Aiama, IUCN</b></li> <li>• Table brainstorming, based on the work IUCN has already done, and the institutional visions/approaches heard, where can IUCN add the most value to, complement and strengthen this community?</li> </ul>	Dev Aiama  Gillian Martin Mehers
17:00	<i>Session 5</i> <b>Advice, Next Actions, and Closing</b>  <i>(Main Conference Room)</i>	<ul style="list-style-type: none"> <li>• Participants Reflections: Advice for the IUCN Bioenergy Road Map process</li> <li>• Thanks and next steps in the process, <b>Juan-Marco Alvarez, Director, BBP</b></li> </ul>	Juan Marco Alvarez  Gillian Martin Mehers
17:30	<b>Drinks Reception</b>	Participants are invited to a drinks reception in the new IUCN building	
18:30	<b>End of the Day</b>	Participants depart	

### Day 3: Internal IUCN Strategy Day

Time	Event	Content	Facilitator/ Chair
09:00	<i>Session 1</i> <b>Day Opening and Review of Strategy Thematic Elements</b>  <i>(Main Conference Room)</i>	<ul style="list-style-type: none"> <li>• Night thoughts and check-in, overview of the day's goals and schedule</li> <li>• Review of ideas from Day 1 and Day 2, <b>Juan Marco Alvarez, Nadine McCormick and Dev Aiama</b></li> <li>• Discussion: Which are most promising? Which build on IUCN's past work and experience best?</li> </ul>	Juan Marco Alvarez  Nadine McCormick  Dev Aiama  Gillian Martin Mehers
09:55	<i>Session 2</i> <b>Elements of a Bioenergy Vision and</b>	<ul style="list-style-type: none"> <li>• Developing a Bioenergy Vision for IUCN. Group creation of a working Biodiversity Vision statement.</li> </ul>	Gillian Martin Mehers



	<b>Strategic Process</b> <i>(Main Conference Room)</i>	<ul style="list-style-type: none"> <li>• Table Brainstorming and exchange: What will make this IUCN Bioenergy Road Map successful in IUCN?</li> </ul>	
11:00	<b>Coffee Break</b>		
11:15	<i>Session 3</i> <b>How to Achieve Those Conditions</b> <i>(Main Conference Room)</i>	<ul style="list-style-type: none"> <li>• Using the elements from the previous session: Participants generate ideas of how to achieve these conditions.</li> <li>• Review of results.</li> </ul>	Gillian Martin Mehers
12:00	<i>Session 4</i> <b>Next Steps and Closing</b> <i>(Main Conference Room)</i>	<ul style="list-style-type: none"> <li>• Reflections from Participants on the workshop and their next steps.</li> <li>• Next Steps, <b>Juan Marco Alvarez, Nadine McCormick, and Dev Aiama</b></li> </ul>	Juan Marco Alvarez Nadine McCormick Dev Aiama
12:30	<b>Lunch</b>		
13:30	<b>Participants Depart</b>		

## Annex 3: Participant List

<b>Name</b>	<b>Organisation</b>	<b>IUCN link</b>
Rômulo S. R. Sampaio	Commission on Environmental Law	Commission
Doris Cellarius	Commission on Environment, Economics & Social Policy	Commission
Christine Dragsiz	Conservation International	Member
Claire Blenkinsop	Conservation International	Member
Jill Heyde	Wetlands International	Member
László Máthé	WWF International	Member
Sebastien Haye	Roundtable on Sustainable Biofuels	Partner
Alex Nevill	Shell	Partner
Sean Tooze	Shell	Partner
Christopher Stewart	The HCV Resource Network	Partner
Martina Otto	UNEP DTIE	Partner
Fatima Baptista	Evora University / REDIENE	Partner
Danielle de Nie	IUCN Netherlands Committee	Region
Regina Cruz	Eastern Southern Africa	Region
Richard Aishton	Europe	Region
Stefano Barchieisi	Water	Thematic
Tim Badman	Protected Areas/World Heritage	Thematic
Daniel Shaw	Forests	Thematic
Jamie Gordon	Forests	Thematic
Andrew Rodrigues	Species	Thematic
Andrea Athanas	BBP – Senior programme officer	Thematic
Dev Aiama	BBP – Bioenergy programme officer	Thematic
Juan Marco Alvarez	BBP - Director	Thematic
Madeleine Breguet	BBP - Intern	Thematic
Nadine McCormick	Energy network coordinator	Thematic
Gillian Martin Mehers	Bright Green Learning	Facilitator

Several regions were unable to attend the workshop in person. However, they provided considerable input beforehand which was introduced into the workshop discussions where feasible. It is also captured below for further analysis by other interested colleagues. They include :

- IUCN South America (SUR)
- IUCN Western and Central Africa (PACO)
- IUCN Oceania

### **IUCN Regional Office for South America**

#### **BIO-ENERGY AND IUCN – OUR WORK ON THE ISSUE – PRIORITIES AND CONCERNS**

Compiled by Ximena Buitrón and Esteban Falconi, November 20, 2010

**Parts 1 (Southern Cone) and 2 (Ecuador) available upon request**

#### **Part 3 - Niches for SUR work**

One of the important niches for Sur work is the incidence in the countries energy matrix through adequate planning, and efficiency/development programs on **alternative energies**. Where to make incidence in the energy field? Three levels of incidence were discussed during the IUCN Regional Committee meeting:

- a. States/countries support strategic planning
- b. Cities and urban centres support integral planning for the energetic systems. Alliances can be favored in cities that have such plans, as well as support from the IUCN committee and commission members.
- c. Organizational strengthening promotion, working with indigenous people and local communities isolated from electric systems, through capacity building, to establish alternative energy sources. This work can be done in cooperation with different local partners, academic, technical experts, etc.

Attached is Joao`s presentation on the issue. In addition, you can see from the information sent by members that are aligned with these.

#### **Priorities from our Sur Program 2009-2011:**

- Analyse energy options and their environmental impacts in some countries.
- Pilot experiences to assess environmental flows in Peru and Chile river basins
- Strengthen knowledge on sustainable biofuels production alternatives
- Social and environmental Standards for biofuels production analysed and adapted. Incidence.
- Promote pilot projects implementing HCVA tool for conservation and responsible production.
- Strengthening knowledge, communication and research on biomass production through networks, members and commissions.

Project proposals on these items have been developed and/or supported.

Regarding Biofuels: Especial interest and interaction has focussed in the biofuels related issues/activities being promoted by the IUCN NC in the region, regarding sustainable biomass production and land use planning (HCVA) as well as in the Knowledge and Learning Network on Biofuels in the Plata River Basin (REDEBIO-CONAP), as part of the Nature and Poverty Knowledge and Learning Network (NP.net). We would like to continue being involved and support these initiatives.

The aim of the network is to exchange knowledge and experiences between academy and civil society organisations to strength knowledge and capacities to influence policies of biofuels expansion in Latin America.

Priorities identified by the network:

- Integral assessment of technical alternatives and production systems towards sustainability, focusing on: Land planning and soil use (biofuels/biomass X food and/or environmental services) and technologic innovation.
- Scenarios and impact assessments, with focus on socio-environmental effects of land use for biofuels production. Strategic Environmental Assessment as a tool, trends in global economy, climate change and relationship with biofuels expansion.
- Policy and legislation, addressing regulatory frames and public policies, production, trade and market regulation.
- Monitoring of the context with emphasis on geographic areas and network assessment.

The Network was led by Peter May from Friends of the Earth – Brazil, Alcides Faria (ECOA, Brazil), Prof. Dely Oliveira Filho UFViçosa, Walter Pengue UNGS / Universidad Buenos Aires, and Farn.

#### **IIRSA PROJECT**

The project Understanding Rapid Environmental Changes in the Southern Tropical Andes, is being implemented in Bolivia, Ecuador and Peru.

The goal of the present project is to promote conservation of biological diversity and ecosystem services in the Southern Andes by supporting improved understanding by civil society and decision-makers of the threats and costs imposed by the combination of large-scale infrastructure development initiatives and climate change.

Activities involve developing with principal stakeholders, alternative scenarios that are more likely to occur in the next 10-50 years under different assumptions and combinations of infrastructure development, climate change variations and socio-economic and environmental change, as well as the identification of policy options for development, investment, and climate change.

The National System of Agricultural Parks in Peru is mentioned as one of the initiatives related to the land use change in the area of influence of the Vial Corridor Amazonas Norte (CVAN), in terms of negative impact. 150,000 ha were identified in 2008 to develop agribusiness and biofuels projects, for investing around USD\$ 650 million around the north and central road axis. The use of the land is for oil palm cultivation and biodiesel production.

Some lands are also destined to sugar cane cultivation to produce ethanol and gasohol.

One of the conclusions of the project is that investments and projects have been decided by central governments, without taking into account consultation processes (required by constitutions, laws and human rights treaties), being the information on the problems very limited in all sectors. Civil society participation is almost null in front of big lobbies from private investment and multilateral banks. Communities affected by these infrastructure projects are little or no informed on those investments.

#### **Part 4**

##### General considerations:

- The need to generate and strengthen alternative energy sources (AES) is unquestionable, not only given the effects of climate change (CC), but also considering the detrimental consequences that fossil fuels have created on the environment, such as soil and water pollution, biodiversity loss or harms to human health. In the later aspect, one must take into account the social implications that fossil fuels production has had thus far, in order to avoid them in activities related to AES.
- There are many activities and initiatives being carried out or soon to be carried out in the region regarding AES, not only by private companies or national governments, but also by other (less

traditional) stakeholders such as non-governmental organizations, research institutions and local communities. The involvement of the later players might be the result of the former's strategies and agendas. For example, if a biofuels program has been launched by the government, many local, farming or peasant communities might get involved due to the fact that they will be growing the crops that will be utilized for processing.

- As a conservation leader, IUCN must necessarily engage in the activities and initiatives being promoted in the various regions, to ensure their sustainability, the protection of the ecosystems and species being potentially affected and the rights of the populations involved. Ideally, IUCN involvement should aim at influencing policy on the basis of comprehensive research that incorporates environmental and social issues.

#### Specific considerations:

Considering the overall implications of biofuels production (not only CO2 emissions), it must be determined if biofuels are in fact more sustainable and less detrimental to the environment than fossil fuels. In this analysis, it is imperative to consider the environmental and social effects that biofuels production might have on human populations. In said analysis, the following could be considered relevant issues:

- Most of the biofuels production activities being carried out currently use crops that are genetically modified organisms (GMOs). This is of great importance given that IUCN stand on this will most likely be seen as IUCN stand on GMOs in general (as it should). The main aspects to consider when dealing with GMOs from an environmental viewpoint are:
  - **Effects on the environment:**
    - Biodiversity loss: given that the genetically modified characteristics of an organism might entail the extinction of other organisms that have environmental functions that would be replaced.
    - Genetic erosion: due to two major aspects: i. extinction of other organisms and, ii. loss of genetic diversity caused by monoculture. In this regard, it is imperative to consider that most biofuels production in present time have been developed on the basis of single crops, such as maize and soy.
    - Introduced (alien) species: GMOs are not naturally occurring species in natural ecosystems, therefore their introduction entails the consequences usually associated with introduced species.
    - Genetic contamination: often times and by natural pollination processes (that are impossible to control), GMOs easily create hybrids that contain the genetic characteristics that were artificially created thus affecting the genetic makeup of natural ecosystems.
    - Greater use of toxic chemicals: thus far, the use of genetically modified crops has necessarily been associated with greater use of toxic chemicals such as herbicides and pesticides (inevitably produced by the same companies who produced the crops).
    - Soil and water pollution: besides producing an increase in soil and water pollution, the greater use of toxic chemicals diminishes their natural nutrients and pose a threat on human health, as it has been documented in several countries.
- Effects on the environment that are not necessarily linked with GMOs are:
  - Food security: soil conversion, monoculture and agriculture aim at fuel production as opposed to food production necessarily entail a threat to food security. Thus far, it has

- implied significant increases in food prices (such as maize in Mexico) or decreases in food availability (such as sugar in Argentina).
- Deforestation: considering that biodiverse areas (or areas that, even if they are not that diverse biologically speaking, play a key role for an ecosystem) might be deforested.
  - Soil conversion: given the vast areas that will be needed to produce biofuels in the necessary volume to contribute effectively to CO2 emission reduction.
    - In the case of producing energy from residues it should be considered if the fuel production is the better use for a concrete residue. If the raw material used is originated from crops, it should be considered if this is the better use of soil in front of other alternatives (food crops, reforestation, etc.). This will depend on the concrete circumstances of each territory.
    - Some biofuels (bioethanol for example) do not give off sulfurate or nitrogenate pollutants, neither solid particles, but others do (for example wood direct combustion).
- **Effects on human populations:**
    - GMOs affect human health: even though the detrimental effect of GMOs on human health has been questioned for many years, there are recent studies that prove they constitute a threat to human health.
      - Effect on human rights: it is imperative to contemplate the effect that biofuels production will have on human rights. This effect can be easily envisioned when considering the way that fundamental rights, such as the right to: life, health, self-determination, a healthy environment, or maintaining cultural practices can be threaten or diminished by some of the environmental effects previously mentioned.
      - Intellectual property rights (IPRs): as it is well-known, GMOs are heavily protected by IPRs, therefore it is essential to analyze the effect that IPRs have had on agricultural practices around the globe. In this regard, one can resort to well documented cases in countries like the United States with crops like maize, or India with crops like cotton and companies like Monsanto. IPRs necessarily affect traditional cultural practices by imposing criteria and dynamics that are alien in its context. Also, IPRs enforcement in the agricultural sector has been characterized by practices such as trespassing, threatening and intimidating small farmers or forcing them to settle potential law-suits that leaves them in bankruptcy.

#### Conclusions:

- Biofuels production should be carefully designed and implemented given its potential effects on the environment and human rights.
- IUCN's influence on relevant policies should be based in extensive and comprehensive research and constructs such as the precautionary principle and the rights-based approach for conservation.
- IUCN's research on the matter should develop from related existing data and experiences.
- IUCN's engagement with the private sector on these issues should take into account their current and proposed stands and policies on the aspects mentioned on this document.



## **IUCN Regional office for West and Central Africa, Martin Nganje**

1. There is considerable fuel-wood management experience in Burkina Faso. Large areas of natural forests are gazetted and managed as fuel-wood production forests by organized forest management committees. Wood-cutting is done on a rotational basis along-side assisted natural regeneration. The system has proved to be very sustainable and still supplies the towns and cities of the country with fuel-wood and charcoal.
2. Meanwhile the best organized fuel-wood and charcoal marketing system is experienced in Mali. The system is supported by the UEMOA (The Economic and Monetary Union of West Africa). It is characterized by well designed monitoring backed by constant statistics.
3. Major problems are related to obsolete legislation which does not take new information into consideration i.e. changing social and economic circumstances. This includes lack of linkages and absence of synergy with related sectors and new mechanisms governed by international conventions.
4. There is a strong need to promote energy efficiency. This can be done by getting stakeholders to work together so that the extracts or remains of one enterprise can become the input / resource of another type of enterprise.
5. Degraded land can be restored with tolerant bio-fuel or agro-fuel species. Arable land (including pastureland) should be avoided as much as possible under such ventures.
6. Some IUCN members (i.e. in Benin and Togo) are deeply involved in the promotion of solar energy (panels). They desire an IUCN policy and strategy that could promote the drive for more investment in this sub-sector.
7. Efficient methods for transforming wood to charcoal are not widespread especially in coastal communities where there appears to be plenty of wood supply. A case in point includes the wasteful process of drying fish using mangrove wood in mangrove fishing communities.
8. There should be a fiscal policy for commercial products that are processed using bio-energy obtained without investment i.e. cement factories, industrial fish-drying, semi-industrial salt making etc.
9. There are linkages between the bye-products of tree and timber / agricultural processing and bio-energy production that needs to be investigated and promoted.
10. There is a competitive product to bio-energy / charcoal in dammed areas. This could be a version of multi-functional platforms, i.e. a single source of energy is resourced and channeled to achieve several functions in the community ranging from grinding to heating to lighting and irrigation.

## **IUCN Oceania Regional Office, Anare Matakiviti**

ORO's involvement on bio-fuel projects is only with the Samoa project. The project involves producing biodiesel using coconuts as feedstock. The biodiesel producing is now used on two vehicles owned by the Scientific Research Organisation of Samoa (SROS) – the research institute that carried out the production of the biodiesel. The institute is planning to expand their research into using jatropha as the feedstock for biodiesel and are proposing large scale jatropha plantation. We have advised them that an EIA will be useful before they commence with the project. They have agreed to this and ORO will be undertaking an impact assessment soon.

There have a lot of interest in bio-fuel production in countries outside the six IUCN countries. For example in Fiji bio-fuel production has been pushed by private sector interest and supported by government policy on reducing dependence on imported petroleum fuels. There is little being done in the area of impact assessment on introduced species, land use, social impacts, etc. We have been trying our best to highlight in any meeting/conference/workshop that we participate in the need for due diligence before any major bio-fuel programme commences. In the Solomon Islands, palm oil planting is done on a large scale and this is being pushed by Asian interests. These two countries unfortunately are outside IUCN energy programme but I am hopeful through other ORO programme e.g. Invasive Species we would be able to reach out to these two countries (both are IUCN members).

## Annex 5: Minutes of Outreach Conference Calls

### Minutes of 1<sup>st</sup> Webinar: December 15<sup>th</sup> 2010

#### Participants

Name	Organisation	IUCN Affiliation
Nigel Dudley	IUCN World Commission on Protected Areas (WCPA)	Commission
Esteban Falconi	IUCN Regional Office of South America (SUR)	Region
Ximena Buitron	IUCN Regional Office of South America (SUR)	Region
Radhika Murti	IUCN Ecosystem Management Programme	Thematic
Scott Klinger	First Peoples Worldwide	Partner
Orlando Venn	International Association of Impact Assessment (IAIA)	Partner

#### Discussion points

1. Question 1 (slide 9) on big issues in bioenergy
  - a. EF: The big issues identified for bioenergy must be dealt with in an integrated manner, as dealing with them separately will ensure large gaps persist.
2. Question 2 (slide 10) on missing components from external institutional bioenergy visions
  - a. SK: need to emphasise the involvement of local communities, particularly indigenous communities in bioenergy stakeholder consultation processes.
  - b. EF: resource efficiency on the production and use sides doesn't necessarily guarantee sustainability (especially where environmental costs are not internalized), so need to ensure that all vision components are considered in an integrated manner. On a related note, the subsidy discussion mentioned in the workshop report is complex as it depends on where the system boundaries are drawn (e.g. if biofuels feedstocks are receiving agricultural subsidies, are those biofuels subsidized?).
  - c. ND: from IUCN's perspective, biodiversity conservation must be front and centre of an approach/vision for bioenergy. It's also important to ensure that bioenergy developments do not undermine local livelihoods.
  - d. OV: gain a clear understanding of the needs of all stakeholders involved throughout the value chain; need to ask the right questions at the appropriate level of policy.
3. Question 3 (slide 11) on IUCN's working vision
  - a. OV: agreed with resilience featuring in the vision statement, clarified the term 'climate change solutions' and whether it includes mitigation and adaptation (which it does).
  - b. ND: vision has all the right elements but need to know how exactly IUCN contributes to its realization.

### *Work activities*

- XB: not clear where other activities beyond biodiversity considerations for broader land use planning come into the potential work area matrix (slide 12), for e.g. case studies, research, communications.
- OV: large focus on land use planning but should also emphasise influencing the actual decision-making happening around land uses (i.e. where this is happening and how exactly to influence).
- EF: target guidelines for land use planning at appropriate levels – not just Ministries, as it is often lower levels of government involved with actual land use planning. Must emphasis the need, at these levels of decision-making, for local and indigenous community perspectives.

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### **Minutes of 2<sup>nd</sup> Webinar: December 20<sup>th</sup> 2010**

#### **Participants**

<i>Name</i>	<i>Organization</i>	<i>IUCN Affiliation</i>
Alan Bond	International Association Impact Assessment (IAIA)	Partner
Barbara Bramble	National Wildlife Federation (NWF) and RSB	Member
Geoffrey Howard	IUCN Invasive Species Programme	Thematic
Jamie Dean	Packard Foundation	Partner
Keith Wheeler	IUCN Commission on Education & Communication	Commission
Martin Nganje	IUCN West Central Africa Regional Office	Region
Martin Sneary	IUCN Species Survival Commission	Commission

#### *Discussion points*

1. Big issues in bioenergy
  - a. BB: what is the best use of biomass, and ensuring its use for the most efficient purposes, is an issue worth adding on its own.
  - b. AB: how ecosystem services are addressed in the bioenergy context is lacking.
2. Missing components from external institutional bioenergy visions
  - a. Holistic and comprehensive approaches at land use planning
  - b. Need to capture social and biodiversity dimensions with more detail
  - c. BB: ensure site-specific (i.e. acre by acre) considerations to determine the best use of biomass while minimizing environmental and social impacts.

- d. MS: many of these approaches are dealing with issues not specific to bioenergy; approaches can be in the context of broad policy frameworks to arrive at genuine sustainability for ecosystem-dependent sectors.
3. IUCN's working vision for bioenergy
- a. MS: use of the word 'building' could imply that resilient systems need to be built from the start (overlooking the fact that natural systems are already, to some degree, resilient), whereas we need to maintain existing systems that are resilient and improve those that aren't – emphasis on building upon what exists.
  - b. BB: approach needs to be nested within the broader agriculture and forest sector where many similar issues are being dealt with; and bioenergy is most often a co-product of an agriculture or forestry process.
  - c. AB: need to be clear about how each key word in the vision is defined, as the term 'sustainable livelihoods' is very broad.

*Potential IUCN work activities*

- MS: important to consider scale-dependence of biodiversity mapping, as there is lots of information at larger scales, but after initial screening on-the-ground planning for biodiversity is complex and needs to be supported by a higher resolution of mapping.
- Decision-making: need to be clearer about how capacity-building can result in influencing actual decisions on the ground / in policy.
- Need to engage agriculture and forestry sectors on similar sustainability issues.
- KW: Need to engage finance sectors – in 2011, investments of \$1 trillion are expected in the renewable energy sector.

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**Minutes of 3<sup>rd</sup> Webinar: January 13<sup>th</sup> 2011**

**Participants**

<i>Name</i>	<i>Organization</i>	<i>IUCN Affiliation</i>
Constanza Martinez	IUCN Global Policy Unit	Thematic
Dick Ottinger	Pace University & Commission on Environmental Law	Commission
Gail Karlsson	Energia & Commission on Environmental Law	Partner & Commission
John Costenbader	IUCN Environmental Law Programme	Thematic
Sheila Oparaocha	Energia	Partner

*Discussion points*

1. Big issues in bioenergy

- a. SO: gender issues are missing in the list of issues, and only featured in the timeline in Annex 1 of the workshop report.
  - b. JC: indirect land use impacts are not mentioned, and the importance of promoting sustainability within broader agriculture and forestry sectors is missing.
2. Missing components from external institutional bioenergy visions
    - a. DO: assisting and training personnel to establish agricultural extension services to help farmers with instituting sustainable biofuel production through appropriate methodologies and marketing resources.
    - b. SO: gender mainstreaming in stakeholder consultations – particular focus on involving local women from rural communities
3. IUCN's working vision for bioenergy
    - a. DO: 'equitable' seems to be missing from the vision statement
    - b. CM: good vision statement, need to set clear targets and measureable indicators over a timeline to begin realizing this vision; a major challenge seems to be that developing countries have incentives for using unsustainable energy resources that are cheaper – how does the vision deal with differences between developing and developed countries and the need for greater collaborations?

*Potential IUCN work activities*

- CM: potential gap analysis is important and must consider that gaps exist not just in bioenergy policy but in most policies for ecosystem-dependent sectors
- SO/GK: need to move beyond simply capacity-building to ensure that real environmental and social improvements are delivered on the ground, through projects.