Policy summary: WWF will only support bioenergy that is environmentally, socially and economically sustainable and considers that effective measures are needed to minimize impacts and maximise benefits. This Policy outlines the key principles WWF believes should guide bioenergy developments.

WWF believes that: To keep our climate safe, at least 80% of our global GHG emissions have to be cut by the middle of this century compared to 1990 emissions levels, as can be concluded from IPCC science review. Achieving such reductions will likely avoid global warming of 2°C. This goal is strongly dependent on immediate action to reduce emissions across all sectors. In order to secure energy supply and combat greenhouse gas (GHG) emissions contributing to dangerous climate change, governments around the globe are setting goals and legally binding targets to create energy from renewable sources, including bioenergy.

WWF believes that bioenergy can be produced sustainably and play an important role in the fight against climate change. However, the complex and interrelated issues raised by bioenergy production need to be explored and rigorously responded to at all levels (from grassroots to global governance) for there to be a sustainable future for bioenergy. Additionally, this technology has to be developed in the context of a broader approach, including other renewable sources and demand management.

WWF recommends that:

- Only ambitious GHG and energy efficient bioenergy pathways should be supported after taking into account both direct and indirect emissions associated with bioenergy feedstock production. GHG savings and energy balances of bioenergy feedstocks vary widely, and some crops perform far better than others. However, crop selection, soil and climate are not the only determining factors. Land-use change, agricultural practices, use of by-products, conversion techniques and final energy use will also affect the lifecycle GHG balance of bioenergy. WWF considers that these factors must be accounted for, otherwise the potential GHG mitigation potential remains questionable.

- Bioenergy production should not be established through the conversion of ecologically important ecosystems (such as natural and semi-natural forests, grasslands, wetlands and peatlands), including those that have been identified as High Conservation Value Areas (HCVAs), in order to minimize impacts on biodiversity. The destruction of ecologically important ecosystems and HCVAs can lead to a host of significant, irreversible consequences, such as the loss of critical conservation areas, increased habitat fragmentation and decreased resilience, decrease of species diversity (including species extinction in extreme examples), increased conflicts between humans and wildlife resulting in serious threats to human lives and livelihoods as well as decimation of wildlife populations, changes in soil structure and reduced fertility and increased GHG emissions (e.g. from peatlands).

- Efficient, multi-stakeholder land-use and water-use planning methods should be implemented to prevent unwanted development in HCVAs and the over-abstraction of water. Some bioenergy crops are associated with increased water demand – often in regions where water is already scarce. Growing a bioenergy crop with increased water use requirements could decrease the availability of water for human consumption, industry and downstream freshwater ecosystems, and also result in changed hydrology and increased soil salination. This must be avoided where water is, or would be made, scarce.

- A comprehensive approach should be implemented in the short, medium and long term to reduce/mitigate the indirect effects of bioenergy production, including indirect land-use change. Increasing scientific evidence shows that large-scale deployment of bioenergy will trigger indirect effects, including indirect land-use change. If bioenergy crop production replaces existing agricultural production capacity, the demand for the initial crop does not simply disappear. As the demand persists, new production capacity will be set up, potentially...
by converting natural ecosystems into agricultural land. Addressing displacement is a complicated matter, made more so by the high risk of competition with food crops creating a ripple effect on poverty alleviation and development efforts. A comprehensive approach, including implementing better management practices, using waste and by-products and growing feedstocks on idle land, can reduce unwanted indirect impacts.

- All actors, including governments should continually monitor the relationship between bioenergy targets and access to food, and relevant policies should be adjusted accordingly. Food security should take priority over other competing uses. At the moment almost all liquid biofuels are produced using crops that are also used for food: corn, sugarcane, soybean and palm oil. Additionally it is important to highlight that the main limitation is and will continue to be land and water availability. Banning the use of food commodities as source of bioenergy - the preferred solution by some governments - will have limited results.

- All actors involved in bioenergy development and production should establish stakeholder mechanisms to ensure that indigenous peoples likely to be affected by bioenergy development can give their prior informed consent to that development and secure relevant land and resource rights, and that all potentially-affected communities are able to participate fully and effectively in decision-making and share in the benefits. The impact of bioenergy development on food prices and availability is not the only social concern. Because indigenous peoples and small producers are often discriminated against and politically marginalised, special efforts should be made to respect, protect, and comply with their collective and individual rights, including customary as well as resource rights. Indigenous peoples have the rights to the lands, territories, and resources that they have traditionally owned or otherwise occupied or used, and those rights must be recognized and effectively protected, as laid out in the ILO Convention 169 and the UN Declaration on the Rights of Indigenous Peoples.

4. WWF will work with governments, international organizations, local communities, business to:

- Support the implementation of the Roundtable on Sustainable Biofuels and other relevant initiatives such as Forest Stewardship Council (FSC), Bonsucro, the Roundtable on Sustainable Palm Oil, and the Roundtable on Responsible Soy in the bioenergy sector;
- Implement better management practices by engaging with producers, financial institutions and other key market players;
- Ensure that governmental policies on bioenergy, including spatial plans, in key producer and consumer countries adequately recognize potential biodiversity and social impacts and adopt efficient measures to avoid unwanted negative impacts.
- Support the development of practical tools for the identification of “go” and “no-go” areas.

5. Field examples

WWF has been promoting the above mentioned principles in a number of key bioenergy producer and consumer countries. In countries such as Indonesia, Brazil and Mozambique, WWF has been building business cases for using degraded lands, improving yields in small holder farms or integrating bioenergy production with other activities. In China, WWF has worked with the State Forest Administration to develop environmental and social sustainability guidelines for bioenergy plantations. In Madagascar, WWF has been facilitating a working group aiming to develop a national policy framework for bioenergy developments. Additionally, WWF has been involved in the implementation of the European Renewable Energy Directive, which sets out the sustainability framework for EU biofuel consumption.

6. Background notes

http://panda.org/bioenergy

7. Related links/supplementary reading

WWF Forests and energy report http://panda.org/livingforests
IUCN and bioenergy  http://www.iucn.org/what/tpas/energy/key/biofuels/
UNEP and bioenergy http://www.unep.fr/energy/bioenergy/
Bioenergy Wiki http://www.bioenergywiki.net/Main_Page