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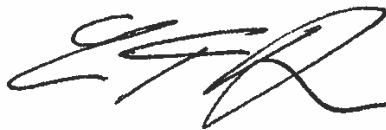
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Vedlagt fremsendes svar på spørgsmål nr. 172 (KEB § alm. del) stillet til udviklingsministeren af Klima-, Energi- og Bygningsudvalget efter ønske fra Steen Gade (SF) den 8. juni 2012.



Christian Friis Bach



Klima-, Energi- og Bygningsudvalget

Til: Ministeren for udviklingsbistand
Dato: 8. juni 2012
Kopi til: Klima-, energi- og bygningsministeren

Udvalget udbeder sig ministerens besvarelse af følgende spørgsmål:

KEB alm. del

Spørgsmål 172

Vil ministeren oversende sit talepapir til brug ved besvarelsen den 31. maj 2012 af KEB alm. del – samrådsspørgsmål G?

På udvalgets vegne

Steen Gade
formand

Samrådsspørgsmål G fra Klima-, Energi- og Bygningsudvalget til udviklingsministeren og klima-, energi- og bygningsministeren:

”Vil ministrene redegøre for, hvordan de vil sikre, at EU-landenes ensidige fokus på 1. generations biobrændstoffer ikke fører til, at fattige småbønder mister deres jord til industriel produktion, reducerer fødevareproduktionen og koncentrerer indtægterne i ulandene på store multinationale selskaber, som stort set ikke betaler skat i disse lande?”

Tak til spørgeren. Efter at klima-, energi- og bygningsministeren har talt om, hvordan regeringen via EU's energi- og klimapolitik forsøger at imødegå de bæredygtighedsmæssige udfordringer, der kan være forbundet med produktion af biobrændstoffer i udviklingslandene, vil jeg i min del af besvarelsen fokusere på, hvordan regeringen forholder sig til samme problemstilling i udviklingspolitikken.

Lad mig først slå fast, at jeg deler spørgernes bekymring for fødevarepriser, jordrettigheder og klimaet som følge af øget produktion af biobrændstoffer i udviklingslandene. Det vel vidende, at adgang til energi er en forudsætning for at bekæmpe fattigdom, og at vi i Vesten – USA og Europa – ved at fastlægge andel af biobrændstof i transport er med til at skabe et globalt marked for biobrændsel. Uden at kende det præcise omfang ved vi, at ønsket om at producere biobrændstoffer er en af årsagerne til opkøb af land i nogle udviklingslande. I nogle lande er indført subsidie-ordninger og skattefritagelse med det formål at fremme denne udvikling. Ønsket i landene er at forbedre energisikkerhed, skabe udvikling i landdistrikter og evt. skabe muligheder for eksport.

Der er ikke tvivl om, at der i mange tilfælde er sociale, økonomiske og miljømæssige bæredygtighedsudfordringer forbundet med sådan produktion. Konvertering af skovområder til bl.a. palme-olie produktion til fremstilling af 1. generations bio-ethanol er et eksempel, hvor miljø og biodiversitet kommer i klemme og hvor befolkningsgrupper, der lever af skoven, sættes under pres.

Derfor er det en vigtig udviklingspolitisk udfordring at sikre, at produktionen af biobrændsel foregår på en bæredygtig og socialt ansvarlig måde. Der er et stort behov i udviklingslandene for at blive bedre i stand til at vurdere muligheder og konsekvenser ved produktion af biobrændsel. Det kan vi bistå med for at kunne skubbe på en bæredygtig udvikling.

Regeringen offentliggjorde i tirsdags en ny udviklingspolitisk strategi – ”Retten til et bedre liv”, som her til morgen har fået enstemmig opbakning i Folketinget. Styrkelse og beskyttelse af jord- og ejendomsrettigheder indgår heri som en prioritet. Det skal sikres, at fødevareproduktion og livsgrundlaget for lokalbefolkninger ikke undermineres gennem leje eller opkøb af jord. Danmark har i FAO aktivt støttet nye retningslinjer, der netop skal sikre at livsgrundlag for lokalbefolkningen ikke undermineres af leje eller opkøb af jord. Det fremgår også af strategien, at Danmark kun vil støtte bæredygtig produktion af biobrændsel. Det er uacceptabelt at anvende jord og vandressourcer til produktion af biobrændsel, hvor disse ressourcer er i direkte konkurrence med fødevareproduktion.

Fødevarer sikkerhed og bæredygtig udnyttelse af naturressourcer er en central prioritet i den nye strategi. Derfor vil der også i de udviklingspolitiske indsatser være fokus på at fremme en ressourceeffektiv fødevarerproduktion, øge adgang til bæredygtig energi og styrke indsatsen for en mere bæredygtig og ressourceeffektiv forvaltning og udnyttelse af vandressourcer. Det skal ske med indsatser over en bred front primært rettet mod at forbedre de nationale rammeværk og relevante politikker.

Som følge heraf vil der også kun i meget begrænset omfang kunne opnås dansk udviklingsstøtte til aktiviteter, der retter sig mod at fremstille biobrændstoffer baseret på såkaldt 1. generationsteknologi. Sådan har det også været hidtil. Der er kun givet støtte til nogle helt enkelte projekter. Det drejer sig bl.a. om forberedelsesstudier i Mozambique og Vietnam samt støtte til et konkret biogas projekt i Honduras.

Udenrigsministeriet udarbejdede sidste år en vejledning til brug for vurdering af bæredygtighedsaspekter af sådanne anmodninger. Der bliver i hvert enkelt tilfælde foretaget en vurdering af, 1) hvorvidt projektet bidrager til lokal social og økonomisk udvikling, 2) om det er sandsynliggjort, at projektet ikke vil udgøre en konkurrent til lokal fødevarerproduktion, og 3) om projektet vil bidrage til at begrænse udledningen af drivhusgasser. I tilfælde hvor det er vurderingen, at disse og andre nøglespørgsmål kan besvares bekræftende, kan der være mulighed for at anvende dansk støtte til biobrændselsaktiviteter, der er baseret på 1. generationsteknologi. Der er dog ikke tvivl om, at aktiviteter

baseret på 2. generationsteknologi lettere vil kunne sandsynliggøre bæredygtighed af et projekt.

Men som spørgsmålet også peger på, er udviklingssamarbejde kun én brik i bestræbelserne på at skabe bæredygtig udvikling i verdens fattige lande og regioner. Politiske tiltag inden for områder som handel, energi, klima, sikkerhed, migration, skat, landbrug og fiskeri spiller ofte en rolle, som overstiger betydningen af udviklingssamarbejdet. Der skal fortsat arbejdes på at sikre den bedste mulige sammenhæng mellem de forskellige politikker. Det afspejles både i den nye lov og den ny udviklingspolitiske strategi, der har fået enstemmig opbakning i Folketinget i denne uge.

Og så er det vigtigt at fortsætte og udvide det internationale samarbejde om at anvende og håndhæve bæredygtighedskriterier for produktion af biobrændsel. Man er allerede nået langt med dette arbejde i forskellige faglige netværk som f.eks. ”Rountable for Sustainable Biofuels” og ”Global Bioenergy Partnership”. Fra dansk side vil vi følge dette arbejde tæt.

Vi skal samtidig huske, at en bæredygtig produktion af biobrændstoffer har et stort potentiale for at fremme lokal erhvervsudvikling i mindre landbrug og små- og mellemstore virksomheder. De små virksomheder kan både være leverandører af råmaterialer til de større virksomheder, og kan indgå i den videre værdikæde med forarbejdning, opbevaring, distribution og serviceydelser. Lokalt producerede og anvendelse af bio-brændstoffer kan indgå i bestræbelserne for at fremme en grøn økonomi, skabe lokal beskæftigelse og

bidrage til en mere klimavenlig energiforsyning. Dermed kan et globalt marked for biobrændstof også have en positiv effekt for den lokale omstilling til en grøn økonomi.

Biofuels - sustainability assessment of development aid programmes and projects

A guide for Danida desk officers

Danish Ministry of Foreign Affairs
July 2011

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1. Introduction and scope

Danida receives an increasing number of inquiries, including from the private sector, on the possibilities for supporting biofuels projects in different Danish co-operation programs, mainly in Africa. The term 'biofuels' is defined in different ways¹, but given the nature of the inquiries submitted to Danida this document focuses on liquid biofuels produced from plants, animals, micro-organisms and waste, i.e. bioethanol, bio-diesel or pure plant oil.

Request for Danida support to biofuels projects are assessed according to the general guidelines and procedures for Danish development assistance. But due to the risk of negative environmental (including climate), social and economic impacts of biofuel projects, there is a need to identify specific sustainability issues, which can provide a supplementary basis for the assessment of such projects.

The purpose of this document is to present key assessment questions which should be applied by Danida desk officers when assessing projects and programmes, which involve production and use of liquid biofuels. The document is not a Danida policy document. The content of the document reflects the thinking of on-going international efforts to develop sustainability criteria and certification schemes for biofuels, in particular the Roundtable for Sustainable Biofuels (RSB) and the Global Bioenergy Partnership (GBEP). Both are multi-stakeholder initiatives aiming at developing global principles, criteria and a certification scheme for sustainable biofuels production (see annex 1 for further details).

Danida will give preference to supporting innovative and climate friendly biofuel production including systems and projects, which aim to stimulate local economic growth (including employment) and social development, and where a maximum share of the biofuels value chain remains in the community and in the country. The projects should have a strong local ownership and participation (local businesses, CBOs etc.) and should help improve the country's energy security, e.g. by reducing fossil fuel imports and expanding access to cleaner energy. The projects must not jeopardize local food security.

In addition to providing support for specific projects, Danida will, where relevant, support development and implementation of policies and frameworks, e.g. in Africa², which can ensure that both smaller and larger biofuel projects are planned and implemented according to national development objectives and sustainability criteria, as well as internationally accepted guidelines. This should also include support to civil society organizations involved in information and advocacy activities.

¹ E.g. the EU Renewable Energy Directive (2009) defines biofuels as liquid or gaseous fuel for transport produced from biomass; UNEP (2009) defines biofuels as solid, liquid or gaseous combustible materials derived from biomass. This definition is also used by RSB and GBEP (see below).

² Several countries in Africa have created, or are in the process of doing so, agencies, policies and action plans for biofuels. Among these are Mali (National Strategy on Biofuels to be implemented by the National Agency for the Development of Biofuels, ANADEB), Kenya (the National Biofuels Committee, NBC, focusing on biodiesel, and the National Bioethanol Strategy), Mozambique (Biofuels Policy and Strategy) and Tanzania (the National Biofuels Task Force to promote development of the sector and to develop legislation).

2. Key sustainability issues

The following key issues address the three main areas of sustainability (social, economic and environmental). As mentioned above, they are aligned with criteria developed by multi-stakeholder initiatives, especially the RSB and the GBEP.

Projects on liquid biofuels shall as a minimum:

- Contribute to **social and economic development** in the communities where feedstocks and fuels are produced. This includes the generation of additional incomes and employment through growing and local processing of feedstocks and biofuels, through increased productivity in agriculture, and through improved infrastructure, e.g. improved access to markets and to energy services. The projects must not compromise local communities' land and resource access and tenure, including the access of migrating pastoralists to water and fodder, and future economic development options. Local baselines should be established and applied.
- Not compete with food production and ensure that **food security** is not reduced by the production of biofuels. If the biofuels are produced on land and / or using water which is currently used for food or fodder crops, such conditions should be compensated by increased and sustainable production of food and fodder by the project elsewhere in the community, or by improved access to (affordable) food markets. Priority should be given to integrated biofuel production making maximum use of waste and supplementary cropping or intercropping that overall increases biomass production. Local baselines should be established and applied.
- Contribute to **mitigation of climate change** by significantly reducing net emissions of greenhouse gases, compared with the fossil fuel uses they replace or avoid. Emissions due to possible indirect land use change, which can be quite significant, should be taken into account. Production of feedstocks on land with high carbon content, such as wetlands, peatlands and forests, must be avoided. The use of crops and production methods, which increase the carbon contents in the soil, should be encouraged. Local baselines should be established and applied.
- Avoid negative impact on **environment**, e.g. from increased air and water pollution and waste generation, or from decreasing water availability below what is necessary for the maintenance of eco-system functions. Local baselines should be established and applied.
- **Preserve biodiversity** and avoid negative impacts on areas with a high conservation value or habitats for rare and endangered species. The production of biofuels should not contribute to erosion of local genetic diversity. An understanding of the local baseline should be established.
- Follow the relevant **policies and laws** of the host country and international agreements, and not violate legal or customary land rights, human rights or labour rights. The project should contribute to decent working conditions, gender equality and not expose workers to occupational health hazards. This should also apply to outgrowers and subcontractors.
- Follow a process of **transparent consultation and decision making** to ensure that local communities to be impacted by biofuel projects are fully informed of the advantages and disadvantages and involved in the planning and decision-making process, leading to free, prior and informed consent.

3. Background

The recent years' high and fluctuating oil prices and the growing concerns about climate change have mobilized a significant international attention to alternatives to fossil fuels. Liquid biofuels have attracted particular interest. This is mainly due to their potential for substituting petrol or diesel in the transport sector, which is strongly affected by the high oil prices. The transport sector is one of the fastest growing greenhouse gas emitting sectors, and also a sector where it has proven difficult to find alternatives to fossil fuels.

This development has triggered an increased interest in production of biofuels from different types of biomass in developing countries. Among the potential benefits for poor developing countries are increased energy self-sufficiency and access; reduced import of fossil fuels; increased agricultural productivity, income and employment; new investment opportunities and reduced greenhouse gas emissions.

On the other hand, the production of biofuels raises a number of issues, in particular on the indirect impacts, e.g. that the use of arable land for biofuels production could jeopardize food security and violate land rights, that biofuels may result in a net increase in greenhouse gas emissions when analysed over the entire life cycle, and that the production of feedstock for biofuels could lead to water shortage, deforestation and other forms of environmental degradation. In the context of development aid, donors, development banks and other stakeholders increasingly require that liquid biofuels be produced in a sustainable manner and that the sustainability can be verified.

Currently there exist no internationally agreed and thoroughly tested certification process and sustainability criteria for liquid biofuels. Discussions are on-going in different international organizations such as the OECD, IEA, UNEP, and FAO. A number of organizations are developing criteria at the regional level, such as the EU and SADC (Framework for Sustainable Biofuels). In addition, there are a number of crop-specific initiatives, such as the roundtables for oil palm, soya and sugar cane (links in annex 2).

The EU has introduced sustainability requirements for biofuels as part of the Renewable Energy Directive, which also apply to biofuels imported from third countries. The EU encourages the development of multilateral and bilateral agreements and voluntary international or national certification schemes that set standards for the production of sustainable biofuels.

International multi-stakeholder initiatives, in particular the GBEP and the RSB, has developed voluntary sustainability certification principles and criteria. Both initiatives incorporate the outcomes of the geographical or crop-specific initiatives mentioned above. GBEP expects to begin a period of pilot testing and open consultations in 2011.

UNEP and FAO are preparing a Sustainable Bioenergy Decision Support Tool, in the framework of UN Energy. An overview document was released late 2010, and the full web based tool is expected to be launched during 2011. This includes environmental and social-assessment criteria with a main focus on the national policy level. OECD DAC issued an

advisory note on the use of strategic environmental assessment and biofuel development in April 2011.

The work of GBEP, UNEP, FAO and OECD DAC is particularly relevant and useful for Danida's possible support to the development of policies and frameworks for production of biofuels in Africa.

The RSB certification system is likely to be more applicable at the project level, which is the focus of this paper. The system involves 3rd party certification bodies and is based on a set of principles and criteria for sustainable biofuels production. RSB has submitted the certification system for approval by the EU³ and will do the same towards other market regulators. The RSB principles, criteria and certification system can be relevant for Danida's project-level assessments, in particular if they are recognized by the EU.

It should be noted that the international initiatives mentioned above are interlinked. UNEP and FAO are both leaders of sub-groups in the Sustainability Task Force of GBEP, and UNEP is a member of the RSB steering board.

4. Types of biofuels

Liquid biofuels, as defined above, can be categorized into first and second-generation biofuels⁴, where the main difference is the use of feed stocks and processing technologies.

First-generation biofuels are produced using conventional and mature technologies, using starch, sugar and oil from corn, sugarcane, rapeseed, wheat, sunflower, cassava, sorghum, oil palm, coconut palm, jatropha, etc. Most of these feedstocks are normally produced for food; some, however, are produced as dedicated energy crops. The most common forms of first generation biofuels are bio-ethanol, which can be blended with (and a substitute for) petrol; pure plant oil and bio-diesel, produced from plant or animal oil. First-generation liquid biofuels are produced in a number of African countries. Zimbabwe, Malawi and Kenya have produced sugar based ethanol for over twenty years in relatively small quantities, used for blending with petrol. Mali has started production of jatropha oil, which is used for decentralized generation of electricity. Among the main concerns regarding first generation biofuels is the possible competition with food crops that may jeopardize food security. Most of the current production of first-generation biofuels in Africa is on a medium to small scale, targeting the national energy market. Larger export oriented projects, based e.g. on jatropha plantations or sugar cane production are, however, established. This has led to concerns about loss of access to land and natural resources in rural areas as a result of allocation of land for commercial biofuel projects, in countries such as Tanzania, Kenya, Mozambique and Ethiopia.

Second-generation biofuels can be produced from non-food sources, such as dedicated energy crops or residues from agriculture and forestry, including straw, corn stalks, bagasse and wood. Second-generation biofuels use thermo-chemical conversion to produce gas or biodiesel, or

³ According to the RSB secretariat, a response from the EU Commission can be expected mid 2011

⁴ Based on UNEP 2009

fermentation to produce ethanol. In the latter, the use of enzymes to break down cellulosic biomass is normally required. Second-generation technologies are generally more complex and expensive than technologies used for first-generation biofuels. Large scale production of second-generation biofuels is not expected to take place before 5-10 years. Second-generation biofuels, which use residues as feedstock, may in some cases lead to lower emissions of greenhouse gases⁵, and will not lead to the same concerns about food security as first generation biofuels. They may thus be a promising option for developing countries. There may nevertheless be important alternative economic uses of the feedstock, e.g. as fertilizer, animal fodder, soil improvement or for generation of electricity, which have to be taken into account when assessing second-generation liquid biofuels. With the technical complexity, second-generation biofuels often require larger investments, better infrastructure and more skilled labour than may be available in most LDCs.

5. Assessing the sustainability

This document is intended to serve as a guidance and check-list for assessment of liquid biofuel projects submitted to Danida. It focuses on climate and environmental effects, social and economic impacts, as well as compliance with policies and legal frameworks. In addition to the sustainability assessment, the project proposals will be dealt with according to the Aid Management Guidelines for Danish development assistance. The commercial viability of the individual biofuel project may also be assessed, e.g. in a market analysis or a feasibility study.

The sustainability of individual biofuel projects needs to be further analyzed in a country-specific context, and the desk officers will have to make a more formal country or region-specific assessments, where needed backed by local or international expertise. For more comprehensive and detailed assessments at the project level, it is recommended to use the RSB criteria and principles, version 2, (see link in Annex 1) as further guidance.

Supplementary to the key sustainability issues listed in section 2 above, this section provides more details for assessing liquid biofuel projects, regarding environmental, social and economic issues, as well as policies and legal frameworks.

Environment and climate

- **Land use and land management.** Production of feed-stock for biofuels should not take place on land with a high carbon stock, which will be released to the atmosphere due to the change in land use, such as e.g. on wetlands, peatlands, forested areas and some types of grasslands.⁶ The biofuel project should contribute to better land and forest management, such as enhanced soil productivity (e.g. through maintaining sufficient phosphorus content), reduced soil erosion, maintained or enriched organic matter in the soil, and not result in reduction in forest cover. The use of perennial crops and agro-forestry techniques can result in maintaining or increasing the soil carbon

⁵ Where first generation liquid biofuels may lead to greenhouse gas reductions of 30-70%, compared to fossil fuels, second generation liquid biofuels can lead to reductions of more than 90% (FAO 2008).

⁶ As an example, the EU Renewable Energy Directive, specifically mentions wetlands, continuously forested areas with a canopy cover of more than 30%, and areas with a canopy cover of 10-30%.

content. Feed-stock production on land, which has other important roles for the community, e.g. for ground water infiltration, water purification, storm or flood protection, should be avoided.

- The project should demonstrate that there is no negative effect from a possible **indirect land use change** due to the project, i.e. if the biofuel investment displaces production of food, fodder or fibre that will be continued on more sensitive lands and may lead to higher food prices, to further demand for water, to reduced biodiversity and to additional release of carbon from the soils. Indirect impacts can be less if residues are used as feedstock (the case of second generation biofuels), or if feedstock comes from marginal land or from land where the productivity has increased. Indirect land-use changes will typically happen outside the project borders, e.g. elsewhere the country or in another country, and will thus need to be addressed within an overall national or international framework. Methodologies for quantifying these impacts are not yet well developed⁷, and until this is the case project proposers should as a minimum present a justified risk assessment.
- **Climate and energy.** The project should lead to a significant reduction in or avoidance of greenhouse gas emissions⁸. Emissions from the entire production cycle and end-use of biofuels, including from a possible indirect land use change, as well as from a possible release of carbon stored in the soil, should be taken into account. Priority should be given to the use of climate friendly feedstock crops and production systems. There should be a significant positive energy balance in the project, when comparing the *input* of energy, e.g. in the form of fertilizer, pesticides, water pumping, transport of feedstock, fermentation, distillation, extraction, refinement and other processing, and the *output* of useable energy in the form of biofuels and by-products.
- **Air, water and waste.** Pollution from production and processing shall be minimized. This includes pollution from pesticides, as well as smoke from chimneys and open-air combustion. If the project introduces cleaner fuels, e.g. for households and the generation of electricity, this could help improve local air quality and health. The project must ensure that surface and ground-water resources are not depleted or contaminated by the project, that water is used efficiently, that the project does not negatively affect access to water (also downstream) and that the biofuel crops and processing are adapted to the local water conditions, e.g. by avoiding water-intensive crops and processes in water-stressed areas. Larger projects should include a water management plan or similar. Waste from biofuels production should be recycled to the maximum possible extent.

⁷ The RSB and the EU intend to present methodologies during 2011. Danida should review the issue on indirect land use change, when such methodologies are available. Some initial guidance from RSB on assessing the impacts on indirect land use can be found in ref 3.

⁸ EU requires that reductions in life-cycle greenhouse gas emissions, when compared to fossil fuels, should be minimum 35% for projects starting in 2010, 50% in 2017 and 60% in 2018. These threshold values do not include the release of carbon due to indirect land use change which can have a significant climate impact, and they may thus not be sufficient to achieve internationally agreed climate objectives. Version 2.0 of the RSB criteria has introduced a 50% threshold for lifecycle greenhouse gas emissions of biofuel blends, relative to the fossil fuel baseline. Again emissions from indirect land-use change are not included. It is expected that the methodologies mentioned under footnote 7 above, will include approaches to address the greenhouse gas emissions from indirect land use change.

- **Biodiversity.** Cultivation of plants for biofuel production should not take place on protected areas or on areas with a high conservation or biodiversity value, or areas which are habitats for rare and threatened species, such as rainforests, other primary forests and highly bio-diverse grasslands. Application of sustainable farming practices for growing feedstocks could improve biodiversity. The project shall only introduce native species or species that are known not to be invasive. Also, the project should not contribute to erosion of local genetic diversity in wild or domesticated species.

Social aspects

- **Incomes and employment.** The projects should help alleviate poverty by increasing local incomes and employment. The project should respect workers' rights (freedom of association, no forced labour or child labour; fair salary, no discrimination, decent working conditions, including for women; etc.) and should not expose workers to occupational health hazards, e.g. in the use of pesticides, or in the processing stage. These principles should apply to employees in the project, as well as to possible outgrowers and subcontractors. Local communities should, to the largest extent possible, obtain a fair share of the value generated throughout the biofuels value chain, including the value produced in farming, transportation, processing of biomass into biofuel, and in the distribution and sale of the biofuel and by-products
- **Food security.** The project should not have a negative effect on food security. Food security can be particularly affected where the project replaces production of staple crops and in communities with limited access to the national food market. The impact can be positive, if the project generates income that enables people to buy more food, or if it leads to improvements in agricultural yields, e.g. through intercropping of biofuel feedstock and food crops. In particular, new, large-scale projects should assess the status and the impact on local food security.
- **Gender.** The project should be gender sensitive, e.g. by aiming at a substantial participation by women, including in decision making and implementation, as well as a fair distribution of workload and benefits among women and men. Projects should not cause the loss of access to land or other productive resources by women.

Economic issues

- **Viable business plan.** The biofuel project should be based on a business plan that reflects commitment to economic viability, poverty reduction and sustainable development and to a continued improvement in economic, social and environmental performance and productivity. Adherence to recognized sustainability criteria and standards, such as those of the RSB, will add value to the company and make the business plan more trustworthy for stakeholders such as the local government and community, the clients and the investors. Sensitivity of the biofuel project's economy to fluctuating oil prices should be considered in the business plan.

- **Other economic uses of land and feedstock.** Consideration should be given to opportunity costs - especially where land is scarce and where other economic uses of the land and the biomass would be more valuable for the community. This applies to land, which might alternatively be used for the production of food crops, or uncultivated land used e.g. for the collection of wild plant species, local hunting, gathering of medicinal plants, or for grazing livestock. In case residues are to be used as feedstock for second-generation biofuels, it should be assessed whether these residues are already being used for fodder, soil improvement and what the change in usage will mean socially and environmentally.
- **Access to water.** The project should not lead to negative economic impacts by diverting limited water resources away from other, higher-value uses, such as crop irrigation, the watering of livestock, and especially household water uses.
- **Access to energy.** The energy consumption required for the project should not compromise current or future access energy. The possible impact of the project on access to traditional biomass for energy (wood, charcoal, dung, residues and waste) should be taken into account. The project should contribute to meeting national and local energy demands and to improve access to modern, clean and affordable energy services.
- **New infrastructure, technology and innovation.** Possibilities for the project to contribute to infrastructure development, technology transfer and innovation that benefits the community and the country, including possible positive spill-over effects to production of other cash crops or agro-processing, should be maximized.
- **Capacity building.** Ensuring the sustainability and success of a biofuel project requires planning, managerial and technical capacity in the community and in the country. Biofuel projects should include capacity building for local staff at relevant levels, and involve community representatives and local or national government staff in capacity-building activities.

Policy, legal frameworks and decision making

- **Policy framework.** The project should be in line with and contribute to national policies, objectives and strategies, for e.g. biofuels, rural development, agriculture, energy security (e.g. reduce dependency on imported oil) and climate change. Regional or district level development plans, strategic environmental assessments and similar should be adhered to. Existing national and local frameworks may not always be enforced, and may not always contribute to sustainable development. In such cases, Danida will consider providing support to strengthen such frameworks.
- **Land rights.** The project should recognize local land rights (formal and customary), and any land classification due to the project should respect these rights. If possible, copies of any legal documents certifying land ownership, in order to avert any land disputes should be requested. Customary land rights should also be investigated, and

documented on the file. Local institutions and processes established to solve conflicts over land use should be respected and involved. Land owners and users should be fairly compensated for any agreed land acquisitions or change in land use rights caused by the project, based on the real economic or market value of the current or future use of the land resource. The project should not lead to the involuntary displacement or exclusion of local smallholders, vulnerable groups or indigenous communities. Attention should be given to 'land-grabbing' practices, where interests in richer countries are buying or leasing large tracts of farmland for agricultural investment in poorer developing countries, including in Africa. Depending on the way they are structured, these investments can either create new opportunities to improve local living standards, or further marginalize the poor.

- **Planning and decision making.** All relevant stakeholders, including local authorities and communities, should be involved in a timely, open and transparent planning and decision making process on the project, leading to free, prior and informed consent, including by the affected community. In case of disagreement, e.g. with people adversely affected by the project, conflict mitigation or resolution measures should be applied. Knowledge about the current and planned use of land and natural resources, and the impact of the project, should be available to the affected local authorities and communities.

Current international initiatives on sustainability criteria for biofuels*EU sustainability criteria for transport biofuels*

The EU has included a set of sustainability criteria in the Renewable Energy Directive of the EU Parliament and the Council of 23 April 2009, and coming into effect in December 2010. The Directive mandates all Member States to include at least 10% renewable energy in their total transportation energy use by 2020. It is expected that most of this renewable energy will be supplied by liquid biofuels, thus making Europe a large future market for such biofuels. Some of these biofuels will have to be imported from third countries.

The Directive establishes the following sustainability criteria for biofuels, which are applicable for EU and for import from third countries:

- A quantifiable substitution of CO₂ in the entire life cycle of the plant, implying that the biofuel production delivers 35% greenhouse-gas savings compared to fossil fuels, rising to 50% in 2017 and 60% in 2018 for new installations⁹.
- The production of feedstock should not take place on land with a high carbon content that will be released to the atmosphere, such as wetlands, forests, woodlands and peatlands.
- Production of feedstock for biofuels should not take place on land with a high biodiversity value.

The main focus of these criteria is environment and climate aspects, and not social and economic aspects that are particularly relevant for LDCs. With respect to third countries, the Directive does, albeit in rather general terms, make reference to social considerations and local prosperity, local food production and prices, displacement and land rights and a number of ILO conventions e.g. in respect of equal remuneration for men and women, and the use of child labour.

The criteria are not binding, but are recommendations to EU Member States for their national action. It remains to be seen whether more binding criteria will be introduced at a later stage, and whether the Renewable Energy Directive imposes a too heavy administrative burden on biofuels producers. The Directive encourages the development of multilateral and bilateral agreements and voluntary international or national certification schemes that set standards for the production of sustainable biofuels, and is ready to recognize them if they meet adequate standards of reliability, transparency and independent auditing. The certificates will guarantee that all the biofuels sold under the label are sustainable and produced under the criteria set by the Renewable Energy Directive.

⁹ These threshold values do not include CO₂ -emissions from indirect land use change. During 2011, the Commission will conduct an impact assessment on indirect land use change, and consider potential changes to the existing legislation. It is also intended to present methodologies for including impacts of indirect land use change during 2011.

In June 2010, the Commission issued two Communications, which specify what the certification schemes must do to be recognized by the Commission. The rules for the certification schemes are part of a set of guidelines explaining how the Renewable Energy Directive will be implemented. Only biofuels that meet these conditions will count towards the member states' renewable fuel obligation.

Link to the Directive:

http://ec.europa.eu/energy/renewables/background_documents_en.htm,

Link to the two Communications: <http://eur-lex.europa.eu/JOHtml.do?uri=OJ:C:2010:160:SOM:EN:HTML>

Roundtable on Sustainable Biofuels

The Roundtable on Sustainable Biofuels (RSB) is a multi-stakeholder initiative aiming at developing global principles, criteria and a certification system for sustainable biofuels production. The participants include farmers, biofuel producers, the transportation industry, environmental and social NGOs, research institutes, governments and investors.

The RSB members are organized in a number of chambers. These chambers each elect two members to the RSB Steering Board (usually one from the global South and one from the global North), who will make all of the decisions regarding the RSB strategy, any changes to the standards, and approve the various options for certification, with decisions made via consensus. The chambers are:

1. Farmers and growers of biofuel feedstocks
2. Industrial biofuel producers. This includes e.g. Novozymes from Denmark
3. Retailers/blenders, the transportation industry, banks/investors
4. Rights-based NGOs (including land, water, human, and labour rights) & Trade Unions
5. Rural development or food security organizations & Smallholder farmer organizations or indigenous peoples' organizations or community-based civil society organizations
6. Environment or conservation organizations/ climate change or policy organizations
7. Intergovernmental organizations (IGOs), governments, standard-setters, specialist advisory agencies, certification agencies, and consultant experts. This includes e.g. UNEP, who is also a steering board member

The RSB has developed a set of 12 principles and criteria (version 2) mainly targeting the project level. They describe the fundamental requirements of a sustainable biofuel production, such as the necessity to consult local stakeholders, greenhouse-gas performance, the conservation of important ecosystems and the mitigation of food insecurity.

The RSB principles and criteria addresses the following aspects of biofuel projects:

1. Legality
2. Planning, Monitoring & Continuous Improvement
3. Greenhouse Gases Emissions
4. Human & Labour Rights
5. Rural & Social Development
6. Food Security
7. Conservation
8. Soil
9. Water
10. Air
11. Use of Technologies, Inputs & Management of Wastes
12. Land Rights

The RSB principles and criteria are so far the most comprehensive list of international sustainability criteria for biofuel projects. They have been submitted to the European Commission for recognition as a voluntary standard under the EU Renewable Energy Directive and the first pilot tests of the application of the standard are being undertaken, one in Germany and one in Mozambique. Further tests are in the pipeline.

See <http://rsb.epfl.ch/> for more details on the RSB principles, criteria and certification system.

The Inter-American Development Bank (IDB)

The Inter-American Development Bank (IDB) has developed a Biofuels Sustainability Scorecard based on the preliminary sustainability criteria of the Roundtable on Sustainable Biofuels (RSB). The primary objective of the scorecard is to encourage higher levels of sustainability in biofuels projects by providing a tool to think through the range of the complex issues associated with biofuels. The scorecard is designed especially to be used by the private sector at the project level, and addresses many sustainability issues. It is not seen as a replacement for certification schemes or life-cycle assessment tools, but should rather inform these processes. The IDB scorecard is work-in-progress and will continue to be updated and revised as needed. See <http://www.iadb.org/biofuelscorecard/index.cfm?language=English>.

Global Bioenergy Partnership

The Global Bioenergy Partnership (GBEP) was founded at the initiative of the G8 meeting in Gleneagles 2005, and has reported on its work to subsequent G8 summits in 2007, 2008, 2009 and 2010. It brings together a number of public decision-makers, as well as representatives of the private sector and international agencies. Its secretariat is hosted by the FAO in Rome.

GBEP is currently developing a set of voluntary criteria and indicators regarding the sustainability of bioenergy, mainly tailored to the national level. A brief report on the work was submitted to the June 2010 G8 Summit in Canada. The Summit issued a declaration, which included support for bio-energy and for the adoption of voluntary sustainability criteria for biofuels. A report containing Version One of the agreed criteria and indicators, together with recommendations on their use, will be publicized followed by a period of pilot testing and open consultations during 2011.

Further details at: <http://www.globalbioenergy.org/>.

UNEP and FAO

UNEP and the FAO are developing a Decision Support Tool (DST) for sustainable bioenergy, targeted to decision makers to assist them in developing bioenergy policies and strategies. It recognizes that many of the questions relating to biofuels need to be answered in the policy and strategy development process. The tool highlights the issues that need to be taken into consideration in the project impact assessment. The intention is to assist authorities when they are evaluating the environment and social impacts and deciding whether to authorize a proposed bioenergy project. The “Sustainable Bioenergy Decision Support Tool (DST)”, overview was published late 2010, and an interactive web-site is expected to be available during 2011. The work links up to and interacts with RSB and GBEP. UNEP and FAO are both leaders of sub-groups in the Sustainability Task Force of GBEP, and UNEP is a member of the RSB steering board.

OECD DAC

In April 2011, the OECD DAC Network on Environment and Development Cooperation (ENVIRONET) issued the advisory note “Strategic Environmental Assessment and Biofuel Development”. The purpose of the note is to illustrate how Strategic Environmental Assessment (SEA) can be used to facilitate sound decision making through the identification of the wider environmental and social considerations associated with biofuels development. It covers mainly questions to be addressed at the national and sectorial level with a focus on 1st generation liquid biofuels. See <http://seatasteam.net/library.php>

References and additional reading

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4. IDB Biofuels Sustainability Scorecard and User's Guide. Inter-American Development Bank, 2009
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6. Analytical Tools to Assess and Unlock Sustainable Bioenergy Potential. FAO/UNEP/UN Energy/GBEP 2010
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24. Biofuels in Africa: growing small-scale opportunities. Briefing. IIED 2009
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28. Biofuels, land access and rural livelihoods in Tanzania. IIED 2009.
29. Bioenergy and Food Security. The BEFS Analysis for Tanzania. FAO 2010
30. Selection of a sustainability standard for pilot assessments of Jatropha producers in Mozambique. Partners for Innovation 2010
31. Bioenergy and Poverty in Kenya: Attitudes, Actors and Activities. Working Paper. PISCES/Practical Action 2010

Links

Roundtable on Sustainable Biofuels (RSB). <http://rsb.epfl.ch/>

Global Bioenergy Partnership <http://www.globalbioenergy.org/>

Roundtable on Sustainable Palm Oil: <http://www.rspo.org/>

Roundtable on Sustainable Soy: <http://www.responsiblesoy.org/>

The Better Sugarcane Initiative: <http://www.bettersugarcane.org/>

The Forest Stewardship Council: <http://www.fsc.org/>

UNEP: <http://www.unep.fr/energy/bioenergy/>

FAO: <http://www.fao.org/bioenergy/en/>

IEA: <http://www.ieabioenergy.com/Index.aspx>

Bioenergy Wiki: http://www.bioenergywiki.net/Main_Page

WWF: http://wwf.panda.org/what_we_do/footprint/climate_carbon_energy/energy_solutions/renewable_energy/bioenergy/