BUSINESS PLAN

CEN/TC 383
SUSTAINABLY PRODUCED BIOMASS FOR ENERGY APPLICATIONS

EXECUTIVE SUMMARY

Business Environment
In 2006, the Dutch government has asked a national group of experts to define principles and criteria for the sustainable production of biomass; the so-called Cramer criteria, after the chair of that group. In parallel UK and German governments have initiated similar activities in the attempt to introduce more sustainable biomass on their internal market. Next, the Commission proposal for the Renewable Energy Directive (RED) on the promotion of the use of renewable energy sources as accepted by the European parliament in December 2008, is directly related to standards for sustainable biomass. Following the intentions expressed by the EU, 10% of renewable energy (mainly biofuels) for transportation in 2020 with the public demand to have them sustainably produced, will mean a huge challenge.

To meet the 20% renewable energy recommendation for the whole energy consumption by 2020, including the 10% for transport, the EU needs hundreds of MtOE from biomass. Moreover, a strong demand for standards on sustainability criteria for biomass is heard from the public, NGO's and the industry to support the further introduction of these biofuels in transport, electricity production and heating/cooling generation

Benefits
To define standard(s) that support(s) certification for sustainably produced biomass for energy applications and introduction of it on the EU market. Next, it brings confidence for the consumers in respect of sustainably produced and processed biomass. It allows biomass generating and energy supplying industries to provide valuable information to the consumers and the market. The biomass may come from various sources including forestry and agricultural by-products and waste. Next, the result of work allows users to check for the sustainability themes as laid down by national and the European authorities.

Priorities and scope
The TC will elaborate on (a) European standard(s) for sustainably produced biomass for, as a minimum but not restricted to, energy applications (such as transport, heat, electricity and cooling). Firstly, this (these) standard(s) will allow users to check for the sustainability themes as laid down by the European authorities (RED). Included are thus:
* definitions, basic requirements, principles, criteria, indicators and related evaluation methods (verifiers) to assess compliance of biomass products to the RED criteria, and
* evaluation methods to assess the capacity of certification schemes and standards to guarantee the conformity of biomass product to the RED criteria.
In addition, the TC may address possible social, environmental and economic themes, both direct and where relevant indirect, which are additional to the sustainability themes defined in the RED, and elaborate criteria, indicators and methodologies for those.

The technical project up to the completion of the draft text for public enquiry is aimed to be 18 months after the start of the TC. The work schedule corresponds with the EU Directive's time goal, pending further Comitology decisions by the Council and the EC. Mainly because the work will include instruments to verify compliance with the criteria that will be defined in the European legislation on renewable energy. It is acknowledged that not all criteria and principles can and should be dealt with at the same level and timing.

1 BUSINESS ENVIRONMENT OF THE CEN/TC

1.1 Description of the Business Environment

The following political, economic, technical, regulatory, legal, societal and/or international dynamics describe the business environment of the industry sector (including agriculture and forestry), products, materials, disciplines or practices related to the scope of this CEN/TC, and they may significantly influence how the relevant standard development processes are conducted and have an effect on content of the resulting standards.

The use of biomass in the European energy and fuel supply is playing an increasingly important role. Both political issues (e.g. EU legislation, Kyoto protocol, Bali agreement) and market issues (e.g. economic opportunities, responsible business) encourage the use of biomass. Part of the biomass needs to be imported from outside the EU. Although biomass has a 'green' image, an increasing concern arises about the sustainability of produced biomass (e.g. including impacts on biodiversity, displacement of food production, but also the effectiveness in GHG reduction). These concerns are not only expressed by NGOs, but also recently by spokespersons in the UN, WTO and EC. Various stakeholders, like forestry, farmers, energy producing companies, end-users, investors, certifiers, governments and NGOs, therefore ask for sustainability criteria to guide their business. Standards can deliver powerful methods; tools to harmonize calculations to describe and monitor how well those criteria are met. In the future, sustainability would give them the licence to produce biomass; political and social support for biofuels and bio-energy will depend on the proof of their sustainability.

In 2006, the Dutch government has asked a national group of experts to define principles and criteria for the sustainable production of biomass; the so-called *Cramer criteria*[1], after the chair of that group. The Cramer principles and criteria are divided in six themes:

1. greenhouse gas emissions balance,
2. competition with food, local energy supply, medicine and construction materials,
3. biodiversity (no adverse effects on protected areas or valuable ecosystems),
4. environment (management of waste, erosion, water and emissions),
5. prosperity,
6. social well-being (social, human and property rights).

The task of the project group was to formulate principles and criteria for the production and the processing of biomass for energy, transport fuels and chemistry. The aim was that these could be made applicable to food, feed and fuel.

In parallel or shortly thereafter UK and German governments have initiated similar activities in the attempt to introduce more sustainable biomass on their internal market. From the 15th of April 2008, UK suppliers of biofuels in the transport sector need to report the product's sustainability[2]. This Renewable Transport Fuel Order (RTFO) includes the idea that future limits or stricter requirements could be issued. The Renewable Fuels Agency has been given the task to arrange for accreditation and data assessment.

In Sweden, since 1986 the Swedish Forestry Agency has recommendations on ecological sustainable extraction of forest biofuels, such as felling residues. The recommendations are updated when new knowledge is reported. The latest update is from 2008. Switzerland is among the first countries that applies since 2008 ecological criteria in life cycle assessment as a

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1 *Testing framework for sustainable biomass*, final report of project group "Sustainable production of biomass", 14 July 2006.

2 The UK uses seven slightly different principles (compared to the "Cramer principles") to underpin the meta-standard approach: damage to large above or below ground carbon stocks, high biodiversity areas, soil degradation, contamination or depletion of water sources, air pollution, workers' rights and working relationships and existing land rights and community relations.

prerequisite for tax exemption of biofuels. In Germany, a Biofuels Sustainability Ordinance has been approved in the beginning of 2008, wherein biofuels will only be credited to the EU-quota obligations and are only eligible for tax reductions if the fulfilment of the requirements of the Ordinance is proofed[3]. Both in Germany and in the Netherlands, pilot studies to initiate sustainable biomass production have been approved by the authorities.

Concerning EU legislation, the proposal for the Renewable Energy Directive (RED) of the European parliament and of the Council on the promotion of the use of renewable energy sources is directly related to standards for sustainable biomass. The first official draft by the EC has been presented on 23 January 2008. The first ideas as ventilated by the EC state inter alia the following:

- In order to encourage the deployment of renewable energy sources, barriers to cross border trade in the internal market of appliances using renewable energy sources, of renewable energy raw material and guarantees of origin of renewable electricity, shall be removed. Harmonised certification schemes, such as a sustainability scheme for biofuels, shall introduce common requirements in these markets.
- The Energy Council underlined the importance of ensuring that the most energy efficient technology available is used for the construction of new capacity and the need for an integrated approach to biomass policy which takes into account sustainability. It is therefore crucial that Member States ensure that the rational use of energy and of natural resources is taken into account in all measures designed to stimulate and promote the production and use of renewable energy sources.
- Biofuels should deliver a minimum level of greenhouse gas savings, should not be produced from raw material cultivated on land converted from high-carbon-stock or high-biodiversity uses; and should comply with EU environmental requirements for agriculture where applicable. The EC considers it necessary to encourage the diversification of the raw materials used for biofuel production. For this reason, it is deemed appropriate to provide extra incentives for biofuels made from wastes, residues, grasses, straw and lignocelluloses material.

The need for having criteria for sustainability, including social and environmental issues, is also stressed by the EU Environment Commissioner and the EU Energy Commissioner. This in response to concerns within society on the EU transport biofuel targets and to requests for tougher standards for biofuel production. The European Council in its March 2008 assembly stated that in meeting the ambitious targets for the use of biofuels it is essential to develop and fulfil effectively sustainability criteria, and to ensure the commercial availability of second generation biofuels. A task group from the Council drafted a set of sustainability criteria, which are intended for use in both the RED and the Fuels Quality Directive[4], under revision in parallel.

It should be noted that Member States or countries under the WTO agreement shall not require additional sustainability criteria. But for a CEN standard this is not a problem, as its use remains voluntary unless it is (or specific parts thereof are) called up in legislation. The final aim is to have (a) CEN standard(s) that describe(s) different sustainability themes including those incorporated in the RED and to develop an evaluation method to assess whether biomass products certified in the framework of other standards comply with these themes. This (these) standard(s) also will allow producers, buyers and authorities to check for conformity to the criteria they deem necessary or legally binding for specific (national or local) circumstances.

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3 The Ordinance takes account of sustainable cultivation (cross contamination), safeguard of natural habitats and greenhouse gas reduction potential.

4 Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC

The standard(s) needs preferably to be developed at a European level for several reasons like:

- achieving the EU targets for renewable energy (20% of overall energy consumption in 2020) and renewable energy for transportation (10% in each Member State in 2020) requires the use of biomass in all Member States;
- achieving the goals and targets of the Convention on Biodiversity (CBD), the International Labour Organization (ILO) and others;
- contributing to a harmonised European energy policy and increasing a sustainable energy security in order to reduce greenhouse gas (GHG) emissions and to make the EU less dependent on importing fossil oil and gas;
- maintaining international leadership on climate change and sustainable energy to which the EU has committed itself;
- providing new economic and social opportunities and in this way contributing to the Lisbon strategy;
- fostering free trade of goods, services and persons, and creating a levelled playing field within the EU.

There is no intention to exclude developing a similar standard at international, say ISO, level. The aim is also to invite many stakeholders, especially NGOs into the discussion. The standard (development) also needs not to be limited to the EU, but checking feasibility of the work at the European level is first priority.

1.2 Quantitative indicators of the Business Environment

Following the intentions expressed by the EU, the biofuels needed to comply with the 10% renewable energy target in 2020, with the public demand to have them sustainably produced, will mean a huge challenge. Not to mention the part biomass has to play in energy generation (electricity, heating and cooling). Although this is at the moment a governmental pull market, it is hard to predict how the support for the initiatives (tax exemptions, regulations, subsidies) and the public demand will drive the actual sustainable production.

Some figures are available to give an indication of the impact the standard(s) might have. In general the International Energy Agency (IEA) predicts a 40% increase of the worldwide total energy consumption in 2030 compared to 2005. In 2004, the EU-25 consumed 11,2% of the world's solid fuels and 14,6% of its oil summing up to a total of 963 million tonnes oil equivalent (MtOE) (source: OECD). Next, two-third of the electricity in the EU is produced by using fossil fuels (source: IEA).To meet current energy targets for the whole energy consumption by 2010, the EU needs 150MtOE from biomass[5]. The bio-energy potential within the EU-27 from agriculture can reach up to 142 MtOE by 2030, compared to 47 MtOE in 2010. The potential of biomass for energy purposes from forestry is in some countries substantial and can be further developed. All this should thus become sustainable energy supply in order to reach the 2020 target for total energy supply.

The EU transport fuel demands in 2005 were estimated at 107 million tonnes of petrol (gasoline) and 174 million tonnes of diesel (gasoil). The EU bio-ethanol fuel production for petrol is in 2007 estimated at 1,7 billion litres and the overall production at 3,7 billion litres; 1,1 billion litres of ethanol were imported in 2007 (source : UEPA, Commission Européenne). The EU biodiesel production capacity in 2007 was 10,3 million tonnes (50% more than in 2006), with an estimated use of vegetable oils for biodiesel is currently estimated at about 5 million tonnes.

Below some data are given to indicate the impact on the imports to Europe and the related sustainability risks. About 17% of the total world palm oil exports go to Europe, where they are still mainly used for food and feed (source: www.rspo.org). In 2007 in Brazil, crops for biodiesel (soy) and ethanol together occupy just 5,5 million hectares, which is under 2% of all farm and cattle land.

5 Biofuels – some myths and misconceptions, NFU, 2007 (www.nfuonline.com)

Local authorities claim there also is 91 million hectare of unused farmland available (source: Reuters, 2008/04/03). Still, there are strong indications that biomass plantations are developed on converted forest land. In Kalimantan, every day 25 km2 of tropical forest is lost, surely not only for oil palm plantations. Three times more forest is lost compared with the area of new oil palm plantations. But new oil palm plantations are for 60% realised in non-degraded natural forest, although large surfaces of degraded land are available[6].

2 BENEFITS EXPECTED FROM THE WORK OF THE CEN/TC

The CEN/TC will define standard(s) under which other (existing or new) standards or certification schemes may act. Indeed, the TC first defines what is considered sustainable produced biomass in a set of principles and criteria, and where relevant also indicators and verifiers, in accordance with the principles, criteria and indicators in the RED. The TC can also, if relevant, use the work done by other initiatives that have developed such principles and criteria, such as for example International Biofuels Forum (IBF), Global Bioenergy Partnership (GBEP), Ministerial Conference for protection of forest in Europe (MCPFE) and Forest Stewardship Council (FSC).

Furthermore, CEN/TC will develop evaluation methods to assess compliance with the CEN Standard of existing or new (industry or cooperation) standards such as those developed by the Better Sugarcane Initiative (BSI), Forest Stewardship Council (FSC), International Federation of Agriculture Movements (IFOAM), International Labour Organizations (ILO), International Social and Environmental Accreditation and Labelling (ISEAL), Programme for Endorsement of Forest Certification schemes (PEFC), Rainforest Alliance (RA), Roundtable for Sustainable Biofuels (RSB), Roundtable on Sustainable Palm Oil (RSPO) and Round Table on Responsible Soy (RTRS). Compliance with the CEN Standard(s) can be achieved through certification to existing or new standards, which have proven conformity to the principles and criteria of the CEN Standard(s) as the CEN/TC will develop the evaluation methods necessary to prove this conformity.

More specifically, the proposed project has several benefits:

A. Environmental: Reduction of GHG emissions like CO_2 is a major objective for using biomass in transport and energy applications (fuel, power and heat). The CEN Standard shall provide (methods to calculate and monitor those) requirements to secure significant reduction of GHG emissions. To this end, eco-balances have to be calculated along the whole life cycle of the biofuels in comparison with fossil fuels. Harmonised methodologies for calculating the GHG emission and fossil fuel balance are desirable.
   The growing market for biomass may affect the world-wide biodiversity, especially by conversion of protected areas or valuable ecosystems. Besides, biomass production may lead to irresponsible use of land (e.g. soil erosion, changes in groundwater level) or production methods (e.g. use of harmful pesticides). The CEN Standard shall provide requirements and evaluation methodologies to preserve biodiversity, to prevent unwanted land use change and loss of carbon stocks and to preserve the quality of soil, surface water, groundwater and air.

B. Economic and social: Biomass plays an important role in transferring the European energy market into a more sustainable one. This should increase the security of energy supply within Europe, due to decreasing dependence of fossil oil and gas imports (some from politically sensitive countries). The standard provides requirements to secure significant reduction of fossil fuel use in the whole life cycle of the biomass chain, in comparison with fossil energy sources.
   Biomass also offers new opportunities for rural areas both in Europe and in other regions through the world. Social aspects and labour conditions are an integral part of sustainable production of biomass. The CEN Standard aims to provide requirements on the contribution to

6 Udo de Haes, H.A., *Palmolie en tropische bossen*. Lecture for symposium of Royal Dutch Academy of Sciences, December 12, 2007, Amsterdam

local employment and welfare, on labour conditions[7] of the employees, the competition with food and local biomass use, and on the consequences for land use rights.

C. Political: The EU has set targets for the share of renewable energy. Biomass is a major energy source to achieve these targets, but the biomass applied should be sustainable to meet the consideration of the targets and to meet the market needs and demands. The EU and Member States may design and manage support schemes for renewable energy sources. Clear sustainability criteria are desirable for supporting biomass production. The CEN/TC provides a set of principles and criteria, which can be used to establish the sustainability of the biomass produced for monitoring the EU targets and for granting financial support.

D. Industrial: Biomass offers new business opportunities for both large industries and SMEs. Conversion and processing of produced biomass in useful end products need innovative technologies, which also contribute to the European knowledge economy. Sustainability is a critical success factor for the lead markets (biomass production, biofuels industry, bio-energy production, bio-based products). At this moment, consumers have mixed feelings about the sustainability of biomass, which is also expressed by statements in the media[8]. NGOs in the field of nature conservation, environmental protection, human rights and development aid closely follow the developments in the forestry and farming industry and express their concerns to the public, industry and governments. The (European) biomass industry would like certification of its processed biomass for sustainability to communicate their responsible business to the stakeholders.

The CEN/TC shall provide principles and criteria, which can be used in the certification process of various biomass products. At the same time, sustainability criteria have to be harmonised in order to ensure that all biomass used in the EU for energy applications is produced in a sustainable way, while maintaining level-playing field conditions that favour the development of a healthy European primary production and multinational bio-energy industry.

The work of the committee shall at least elaborate evaluation methodologies to check compliance with the minimum sustainability criteria regulatory required by the RED[9]. Talks with the EC have led the TC to believe that the administrative process for a formal Mandate related to the RED is an option that the EC will consider. The formalisation process to come to harmonised standards should however not be affected by the timing needed and wanted for this work (see Clause 4). In any case the TC will provide industry with documents that facilitate compliance with the European regulatory requirements.

3 PARTICIPATION IN THE CEN/TC

All the CEN national members are entitled to nominate delegates to CEN Technical Committees and experts to Working Groups, ensuring a balance of all interested parties. Participation as observers of recognized European or international organizations is also possible under certain

7 Excluding issues covered by Article 137 of the EU treaty, which are already legally covered.

8 An example of declining public acceptability of biofuels. In 2005/6 UK non-governmental organisations (NGOs) were campaigning to encourage supply of biofuels and industry was proudly proclaiming new investments in production. By summer 2007, the views of many environmental NGOs had switched and a UK campaign generated over 6 000 letters urging the Government to “Choose the right biofuel or the orang-utan gets it!” More recently the opposition against biofuels has hardened and an on-going campaign to stop the introduction of the RTFO has generated over 13 000 emails in a few days.

9 It is important to notice that there are wide differences in growth conditions in European and non-European countries and in North – South dimension, e.g. specific conditions in boreal forest ecosystems and Mediterranean forest ecosystems, etc. Those sustainability criteria mentioned in the last version of the Renewable energy directive are far from clear and adequate. There are several aspects which are not relevant, e.g. for boreal forest systems.

conditions. To participate in the activities of this CEN/TC, please contact the national standards organization in your country.

Technical liaison can be offered to European or worldwide organizations to represent certain stakeholders in the discussion. Especially NGO and biomass producer representatives are invited to participate through direct nomination or liaison. As a matter of fact, some European organizations have been involved directly from the first meeting. The actual amount of liaison organizations stands at 11 granted liaisons.

4 OBJECTIVES OF THE CEN/TC AND STRATEGIES FOR THEIR ACHIEVEMENT

4.1 Defined objectives of the CEN/TC

The TC will elaborate on a European standard(s) for sustainably produced biomass for as a minimum, but not restricted to, energy applications (transport, electricity, heating, cooling). Firstly, this (these) standard(s) allows users to check for the sustainability themes as laid down by the European authorities (RED). This means inclusion of:

- definitions, basic requirements, principles, criteria, indicators and evaluation methods to assess compliance of biomass products to RED criteria, and
- evaluation methods to assess the capacity of certification schemes and standards to guarantee the conformity of biomass product to the RED criteria.

In addition, the TC will address - in documents like Technical Specifications and Technical Reports - possible issues, including social, environmental and economic themes, direct and where relevant indirect, which are additional to the sustainability themes defined in the RED, and elaborate criteria, indicators and methodologies for those.

The technical project up to the completion of the draft text for public enquiry is aimed to be 18 months after the start of the TC. Taking into account the formal procedure of discussing the draft text in a Technical Committee (including parallel full establishment of the TC) the final (formal) acceptance vote can be achieved in two years. Depending on the date of registration of the work item, the first standard will be published by the end of 2010. This schedule is extremely ambitious, but should correspond to the need of instruments to verify compliance with criteria defined in the RED.

4.2 Identified strategies to achieve the CEN/TCs defined objectives

As indicated before, the work shall elaborate on and complement the minimum sustainability criteria in the Renewable Energy Directive. After all, no-one will want to go to the trouble of certifying that their biomass meets the CEN Standard, if that doesn't make it a qualifying renewable energy product under the RED. It is envisaged that the scope will also include sustainability issues that complement the European directives, thus enabling business to work beyond compliance. A different time line is necessary for different parts of the TC's scope, thus enabling different standards being published separately at different times.

For the issues to be selected, principles, criteria, indicators and verifiers will be developed. From a viewpoint of expertise needed, it is suggested to start working groups related to these themes and also to a number of general issues.

Regarding the given European regulatory sustainability themes in the area of renewable energy (see Clause 1), the Technical Committee will at least detail the legally given criteria, laying down indicators, methodologies and guidance, thus enhancing their implementation. In addition, it will define - in documents like Technical Specifications and Technical Reports - possible issues, including social, environmental and economic themes, direct and where relevant indirect, which are additional to the sustainability themes defined in the RED, and elaborate criteria, indicators and methodologies for those .

The CEN/TC acknowledges the fact that not all criteria can and should be dealt with at the same level. Some are supported by sufficient research work to allow them to be specified towards a deeper level than others, possibly including specified indicators. Of course, terms and definitions need to be developed ahead of the other work. Looking at the intended development timeframe (see 4.1) the CEN/TC prefers to use pre-standards like Technical Specifications (CEN/TS), where necessary to define first conclusions. Once the standard(s) is (are) established, work on commodity specific standards or more certification-related documents can be considered.

Although many stakeholders would prefer global standardization, discussions in ISO and in the Roundtable on Sustainable Biofuels (RSB) give indications that it would be difficult to produce draft international standards within the aimed timeframe. The regulatory framework for the sustainability criteria is somewhat harmonized within Europe which could form an easier basis for international discussions. ISO and CEN have possibilities and interfaces through the Vienna Agreement, to move this work forward in parallel once such becomes feasible.

Parallel work in terms of various parts of the standard are foreseen: the themes as indicated above and a general part. All of these may follow different timelines and be revised on their own merit. The division into parts makes the work load bearable and attractive for relevant experts in working groups.

The exercise undertaken shall regard principles of management standard series like ISO 9000, ISO 14000 and ISO 26000. Looking at the favoured international harmonization in the long run, the fossil fuel and GHG calculation methodology should take into account ISO 14040 for Life Cycle Assessment and ISO 14064 series for GHG accounting and verification. So, the proposal is to consider these international initiatives, amongst others, in the CEN process. Particular points of interest include: a sufficiently broad scope (inclusion of 1st and 2nd generation biomass and co-produced other products), no open ends; as far as possible science based; and feasible. Next, the Greenhouse Gas Protocol, an accounting protocol of the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI) shall be, amongst others, considered in the CEN process.

The Technical Committee needs additional and specific expertise on top of that available in the acting CEN/TCs on biofuels (CEN/TC 19 on gaseous and liquid (bio) fuels, CEN/TC 335 on solid biofuels and CEN/TC 343 on solid recovered fuels). Co-operation with these CEN/TCs through the Secretariat shall be guaranteed. Exchange of information with CEN/TC 183 (waste management), CEN/TC 292 (characterization of waste), CEN/TC 350 (sustainability in construction works), CEN/BT/WG 189 (energy management) and use of applicable standards in the product related committees (fats and oils, cereals, wood and soil improvers) is also envisaged. Definitions, terminology and principles are to be harmonized as far as possible

5 FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE CEN/TC WORK PROGRAMME

The EC has written in its proposed Renewable Energy Directive: "It is in the interest of the Community to encourage the development of multilateral and bilateral agreements, and voluntary international or national schemes setting standards for the production of sustainable biofuels and other bioliquids, and certifying that production of biofuels and other bioliquids meets those standards". As indicated above, the intended standard(s) should not only include issues, which are presently included in the RED, but in addition should include - in documents like Technical Specifications and Technical Reports - social, environmental and economic issues, direct and where relevant indirect, which are relevant for sustainable production of biomass. This notwithstanding the fact that this might have a major impact in the planning and focus of the TC's work.

Furthermore, the criteria should not only focus on transportation fuels, but also on other energy applications of produced biomass, be it that these are sometimes worded differently. As stressed above, inclusion of social, environmental and economic criteria, and fossil fuel and GHG balances is desirable in the harmonisation and standardization process of sustainability criteria. The CEN Standard(s) need(s) to build upon and elaborate methodologies and instruments to ensure compliance with the EC Directive requirements, keeping in mind that the discussion on them is still open, and to provide inclusive and additional certification possibilities in order to enable business to go beyond compliance. In addition, regulations in CEN Member Countries need to be incorporated where applicable.

Discussions between the needs for those who only want to fulfil the (future) regulatory requirements, which are expected to be WTO-compatible, and those who consider additional (social, environmental and economic) issues and indirect effects as important issues for public acceptance, will certainly have influence on the progress. Another issue is that biomass used for energy applications can also be used for other applications as food, feed, raw materials for construction, paper and pulp or chemical industries; it may well be necessary to pay attention to possible interactions between these different applications.

The standard(s) will be the basis for certification of biomass for energy applications. In that sense, it has relations to work under development in the Netherlands in projects like BIOPEC, work in the UK to explore the feasibility of developing a "kite mark" for sustainable biomass under RFTO and proposals being developed in Germany and the Scandinavian countries for a sustainability label. It is thus important to avoid duplication between all of these schemes in terms of the basic criteria, terminology, etc.

Next, sourcing sufficient input from the biomass producers (especially those in the developing countries) seems to be an obstacle. It is hoped that information can be generated through acting pilot projects, NGOs and technical liaisonship with their representing organizations. There is a risk that the TC work raises barriers for biomass and biofuel producing countries outside Europe. Instead it should be the intention to create a transparent and functioning sustainable biomass standard covering Europe and countries outside Europe.

In addition it is important to notice that arable land and forest ownership is often dominated by small owners. Therefore, standard development should take this aspect in to consideration – i.e. to avoid too much bureaucracy, avoid unnecessary costs and avoid barriers. It is also important to keep in mind that a lot of biomass for energy purposes is residues or by-products from agriculture, forestry or related industries. Forestry and agriculture are in many ways already governed by laws, regulations and directives. Several of them related to ecological and sustainability aspects.

Due to the broad experience needed from different industries and organizations, the Technical Committee needs to be thoughtful in developing its structure and as far as feasible divide drafting work amongst different group of experts. On the other hand, it would also be a challenge for the CEN Members to find a balanced delegation to the meetings and to restrict themselves for experts nominated for the work.