**Title:**

# Broadening the view:
# From biofuel standards to an international standard-setting scheme for a sustainable use of natural resources

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**Abstract:**
Recent discussions and international initiatives on certification of biofuels have demonstrated the urgent need to implement international standards for the sustainable production and use of energy crops and bioenergy.
However, since globally grown bioenergy feedstocks cover a wide range of products which are not necessarily used exclusively for energy purposes, the discussions bear potentials for an even broader standard approach which would integrate a wide range of products derived from biomass and other natural resources into one system.

This paper outlines thoughts on how a generic international standard could be created.
It provides a description of the concept and objectives of a generic standard-setting scheme and identifies benefits that could arise from mobilising synergies and collaboration between existing initiatives as well as the benefits and motivations for different stakeholders to participate in such a scheme.
Moreover, it outlines international requirements for setting such a standard and discusses opportunities and drawbacks of different approaches (meta-standard versus new generic standard).
Further questions on the design of the standard are tackled with regard to the level of rigour and the level of requirements of the standard, the type of standard, its principles and the measurement of impacts. Eventually different implementation options will be outlined.

## 1. Introduction

The world's natural resources face increasing pressure due to rapid population and economic growth. The projected 50% growth in global population over the next 50 years will be a significant challenge for sustainable development.

Ensuring sustainable use of natural resources will require a reduction in resource use as well as the development of sustainability benchmarks that consider social and environmental aspects in the management of natural resources and their derived products. To address these objectives, certification systems and standard-setting schemes can serve as an additional or even alternative way to political regulation which often faces opposition from industries and retailers.

To date, many of such schemes have been established, and they have successfully implemented sustainability standards for a wide range of products and activities (e.g. food, cosmetics, flowers, textiles, and forest products, as well as activities such as mining, fisheries, etc.). However, many of these schemes do not operate at the scale at which global industries and agriculture are currently operating.

The world-wide growing demand for bioenergy, as well as the increasing concern about the sustainability of biofuel production, has led to the development of new initiatives for sustainability standards and certification schemes for bioenergy. These include the Roundtable on Sustainable Biofuels (RSB), the Global Bioenergy Partnership (GBEP), and others (van Dam et al. 2007). The complexity of defining sustainability standards for bioenergy highlights the global nature of the problem. Due to the fact that bioenergy feedstocks can be numerous and can be used to create many products other than bioenergy (e.g. food, animal feed, cosmetics, building material), there is a big overlap between existing certification and standard-setting schemes.

The growing range of certification and standard-setting schemes that has been developed in the last years indicates a growing corporate need to address environmental and social issues. However, it has also resulted in a significant degree of complexity that could limit the effectiveness of these schemes (Sustainable Foodlab 2007).

Most importantly, due to the proliferation of standards it is becoming increasingly difficult for industry, civil society and consumers to follow, participate in, and implement all of these different approaches. A further proliferation of standards may lead to a loss of control, a loss of opportunity for meaningful participation, and substantial confusion of various stakeholders. In addition, poor performers could potentially hide within this confusing context.

Moreover, many of the environmental and social standards apply to niche markets. Given the recent development that larger volume producers are capturing increasing market shares by aggregating production and distribution (a trend further accentuated by globalisation), the current situation requires environmental and social standards that reflect the speed of these changes.

On the other hand, there are many similarities and synergies among the different schemes. The schemes all agree on the need for principles, criteria, and (measurable) indicators for key environmental and social issues associated with their particular product or sector. In addition, there is in general a large degree of similarity in overall principles in the systems across products and sectors. Furthermore, the schemes are similar in that they are generally voluntary, and in that they involve buyers, producers, supply-chain partners, investors and NGOs. Moreover, the systems have a common need to ensure traceability and verification in the supply chains. They also need to establish bodies to manage the schemes and verify that any claims made about end-products can be substantiated if necessary.

The similarities of the approaches and common requirements of each system - particularly in the case of those systems currently being developed - suggest that there may be a way to capitalise on the apparent synergies for all products derived from natural resources, and to develop an effective and efficient, overarching global standard-setting approach. The current discussion on how best to

implement bioenergy standards could be a forerunner to, and window of opportunity for, the development of a respective Global Standard-Setting Scheme.

It is important to note that the global standard-setting scheme approach, as outlined here, is a relatively new idea and a new approach to the global harmonisation of standards aiming to effect real social and environmental change. The discussion paper (WWF, Ecologic 2008), this article is based on, should serve as a first step to initiate a debate on the opportunity and usefulness of developing such an approach. The main issues of the paper are substantial part of the ongoing social-ecological research at Ecologic Institute. It has been written with financial support of the German Federal Ministry of Education and Research in the framework of the Social-Ecological Research Programme.

## 2. Objectives and benefits of a generic standard

### 2.1 General objectives

The objective of a Global Standard-Setting Scheme for Natural Resources (NRS) is to create a generic international standard whose implementation would equitably, transparently and measurably reduce the key social and environmental impacts of extraction and production of products derived from natural resources.

More specifically, the scheme aims to:

- encourage socially and environmentally responsible business practices with regard to the extraction or production of products derived from natural resources.
- provide an impulse towards production patterns that are more sustainable, and reduce the key negative impacts generated by the actual use of natural resources.
- encourage a growing market segment to implement better management practices of natural resources in terms of environmental and social performance.
- provide a uniform standard that can be applied when evaluating the sustainability performance of a diverse array of products derived from natural resources.
- overcome limitations of current standard-setting schemes and exploit synergies between existing systems.

### 2.2 Benefits of a generic standard compared to current standard schemes

A generic standard would apply at global level. Many of the current standards have a limited regional scope or application. Ecolabels, for instance, are generally developed based on national environmental priorities and preferences (UNEP 2005). The life-cycle of product development has, however, become increasingly complex and global. Particularly indirect effects of natural resource use such as “leakage” or “displacement” effects e.g. due to indirect land use change are difficult to control but may have severe social and environmental consequences. Moreover, commodities are being traded at the global scale to a growing extent. Different regional standards can pose difficulties for trade, as for instance in the organic sector. A global scope would enhance the consistency of standards and increase its performance by including macro-effects that are not covered by regionally applied standard schemes.

It would cover a broad range of natural resources as well as social and environmental criteria in one standard. Current systems refer to a large extent to individual commodities or sectors. However, not only are the underlying objectives similar, but the issues are also often related to each other. The conversion of forests into palm oil plantations, for instance, shows the interlinkage of different commodities - in this case timber and vegetable oil. A system covering a broader range of natural resources can help overcome these limitations. Moreover, beside to the existing systems and those currently under development, there exists a range of products and sectors for which standards have

not yet been developed, but which would have similar requirements. For example, Jatropha, Miscanthus, and other plants used as bioenergy feedstocks still lack a sustainability standard although gaining in importance in the current debates on sustainable bioenergy.

Although there are some standards that address both social and environmental issues, many are still limited to certain criteria usually either environmental or social in nature. This leads, for example, to situations where the consumer has to decide between a fairly traded product and one with an organic label. The NRS could help merge both demands.

There would be a scaled, industry-wide application. Many of the current schemes do not operate at the scale at which global industries and agriculture are operating. The development of one global standard with an industry-wide application would enable actors along the value chain to efficiently concentrate on implementing the standard, instead of developing yet another new standard. This would consequently prevent a further proliferation of standards. Costs associated with being part of a broader effort could be offset by the much greater market penetration. A greater market penetration would again link to a greater effect in improving environmental and social performance (see also Cashore 2007).

A generic standard could help excluding poor performers. Labels/schemes with very low or immeasurable requirements may be (mis)used for “greenwashing” purposes by producers, companies or other actors in the value chain. Limiting the number of standard-setting schemes and certification systems on the market ensures that poor performers cannot hide as easily as a result of the confusion of different standards and the often insufficient control mechanisms.

## 2.3 Stakeholder benefits

With no substantial debate yet going on between stakeholders reflecting the benefits and drawbacks of a generic standard scheme, motivations to join in such an initiative can only be assumed. However, interviews with experts conducted during the study showed that there is a common interest in developing a generic standard due to a number of advantages for various stakeholder groups (such as civil society organisations, business/industry and governments). It has to be noted that costs and benefits for different stakeholders largely depend on the eventual characteristics of the standard.

A main benefit for industry will probably be related to a “one-stop shop” approach that focuses on one single standard, instead of the current range of different standards and labels. It would allow for more efficient structures, save costs due to better management practices, ease administration tasks involved with the many different standards/labels, make it unnecessary for current industry initiatives to create new, individual standards, and fulfil consumer demands for sustainable products at the same time. Costs derived of being part of a broader effort could be offset by a much greater market penetration. Civil society organisations (which usually have limited capacity due to limited funds) would also benefit from the generic standard or “one-stop shop” allowing stakeholders to concentrate their efforts and contributions on one forum.

Another incentive for industry may be the price premium that can be achieved if the product will be labelled and/or due to quality increases that command better prices. However, there are also non-monetary benefits of using standards. Voluntary self-commitments to standards can increase business credibility. The application of environmental and social standards may also anticipate consumer demand and may avoid public regulations. Also, if application increases, the provision of third-party verification of sustainable practice can also support companies’ risk management strategies (Taylor 2005).

Although governments belong to the major constituency of traditional standard-makers, they are most of the time absent from standard-setting exercises. The current standard-setting initiative for sustainable bioenergy is one of the significant exceptions. However, as recent initiatives - such as governments’ involvement in CSR (Corporate Social Responsibility) - show, governments push for

stronger influence in the standards' developing processes, in order to merge strategies of sustainable development into standards.

Governments can directly support the implementation of the standard, for example by investing in the infrastructure needed for the standard-setting or certification process and in capacity building, or indirectly through tax system changes or the easing of export restrictions.

## 3. Setting the standard: Approaches and design

### 3.1 General approach: meta-standard versus new generic standard

A generic standard could essentially be designed in two different ways: A meta-standard or a new generic standard (see Figure 1).

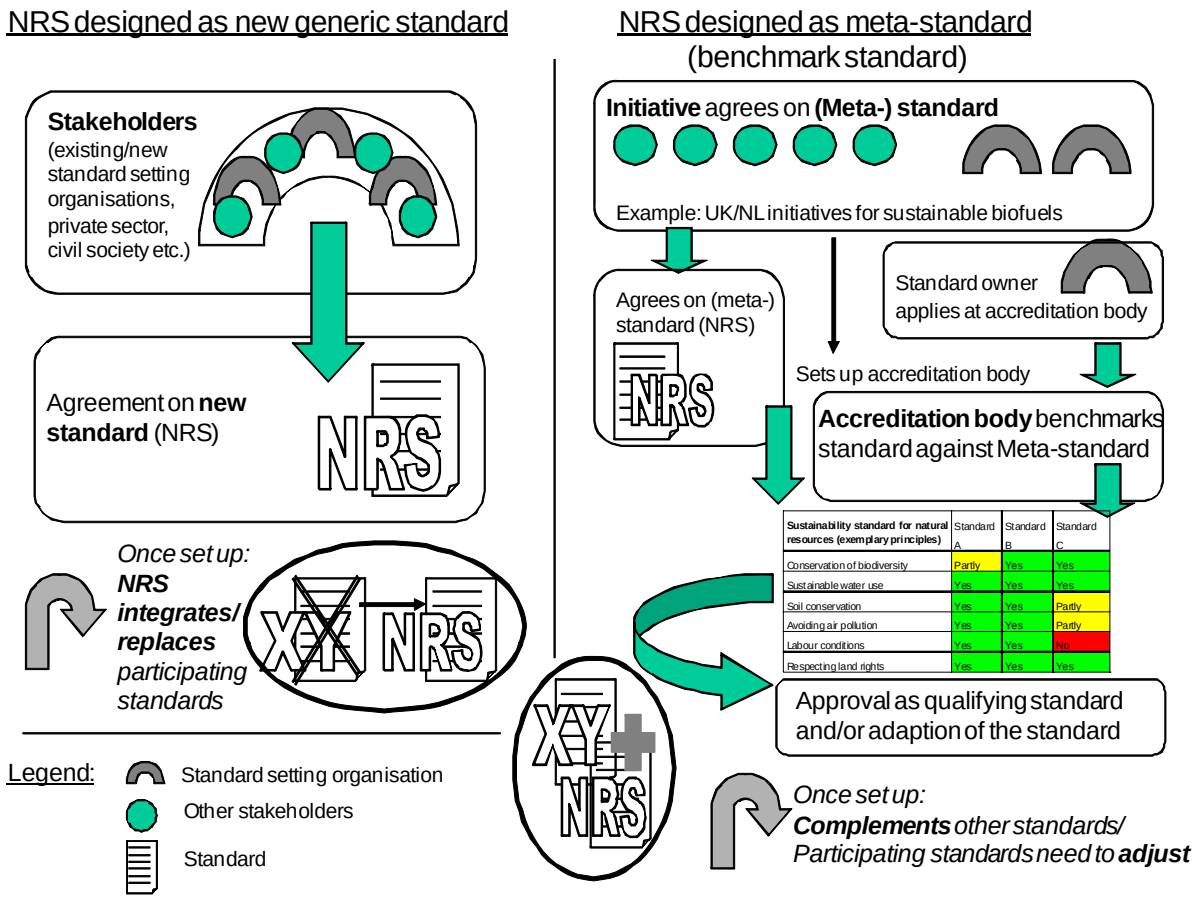


**Figure 1: New generic standard versus Meta-standard approach**

#### Meta-standard approach

The meta-standard serves as a benchmark standard. Instead of requiring producers to get certification for the meta-standard directly, compliance with the meta-standard is achieved through existing standards (such as FSC, Fair Trade, etc.). These would have to have proven that they provide a sufficient guarantee that (most of) the principles and criteria of the meta-standard are complied with. Existing standards that provide this guarantee are called 'qualifying standards'.

The rationale behind a meta-standard approach for sustainably managed natural resources is given by the variety of already-existing standards, cover sustainable agriculture, forestry, food production, cosmetics, fishery, etc. It might therefore be unnecessary, or even undesirable, to develop yet another standard for which producers need to be certified. A more convenient approach could be to make maximum use of existing standards.

The meta-standard approach has been taken up by many standard-setting initiatives for biofuels and bioenergy that were developed recently in the UK, the Netherlands and Germany. A review of those three examples was recently presented in a report by Ecofys Netherlands (2006 and 2007).

**New generic global standard approach**

The alternative to a meta-standard approach is the development of a completely new standard, with its own set of principles and criteria/key indicators according to which producers can become compliant. It would require establishing a non-governmental umbrella organisation composed of stakeholders of the existing or currently developing natural resources standard-setting schemes. Consequently, schemes participating in the NRS would need to agree to revise their standards to achieve full alignment with the new generic global standard, eventually merging into the new standard.

**Which approach should be taken?**

Each approach has benefits and drawbacks. While for the meta-standard it is supposed to be established in a shorter term, the new generic standard would probably need a longer time due to more extensive agreement processes among stakeholders. A new standard may also result in low acceptance, especially if such a standard is developed without sufficient involvement of stakeholders. Producers, for instance, that are already compliant to a standard may be reluctant to change to a new standard. Allowing certain standards (that are part of existing or currently developed standard-setting schemes) as qualifying standards, may improve the acceptance of an NRS designed as a meta-standard, particularly among existing standard-setting initiatives and already certified businesses.

However, changes in a meta-standard (e.g. introduction of new criteria, changes in thresholds, etc.) will not take effect directly, because these changes will only be reflected indirectly through the “qualifying standards”. In contrast, a new generic standard - once fully incorporated - would be directly applicable on every commodity that is covered by the standard. Moreover, the advantages of having a “one-stop-shop” as outlined above would be realised more effectively by a new generic standard as it would reduce the complexity of current standards and certification schemes, and could be taken-up more easily by producers and buyers. It could also contribute to better communications towards consumers compared to the meta-standard. Once agreed on the process of developing a joint new standard scheme, maximum use of synergies between existing standards can be generated because it would enable a more transparent, streamlined stakeholder dialogue than the development of the meta-standard.

The question of which approach to choose is an important one, relevant both for the implementation of the standard as well as for the initial starting phase of the standard-setting procedure. This is due to the fact that a decision on the approach has implications on the governance and decision structure of the standard-setting body. The concrete set up of objectives for the NRS will therefore be the main factors influencing which standard-setting organisations and other stakeholders will support (or even oppose) the development of new generic standard. Theoretically, a combined, third approach is also possible. In this approach an initial meta-standard is developed, which later merges to form a new generic global standard.

## 3.2 Design of the standard

No matter which approach has been chosen, several aspects with regard to the design of the standard have to be considered when developing a generic standard scheme:

1. Scope of natural resources covered under the scheme
2. Selection of minimum or maximum standard
3. Type of standard

The choices made under these topics obviously affect the range of stakeholders being involved in the process. This is again important for the decision of the approaches outlined above. If, for instance, the scope of natural resources covered under the scheme is narrow it would not be sufficient to apply a new generic standard since the particular strength of having the potential to subordinate a wide range of natural resources under one scheme would be undermined.

**Scope of natural resources covered under the scheme**

Given the similarity of the threats natural resources face world-wide due to unsustainable use, the NRS should provide a uniform standard which can be applied to a diverse array of products derived from natural resources. However, natural resources cover a considerable range. According to the European Commission's definition, natural resources include:

- raw materials (e.g. minerals, fossil energy carriers, biomass),
- environmental media (e.g. air, water, soil),
- flow resources (wind, geothermal, tidal and solar energy), and
- space (land use for human settlements, infrastructure, industry, mineral extraction, agriculture and forestry) (COM 2005).

Since the NRS aims to use as many synergies as possible between existing standard-setting schemes, and considering the high policy relevance of an increased use of bioenergy and the need for sustainability criteria, an initial focus on biomass is suggested (see Figure 4). It should, however, be expanded to address a broader scope at a later stage.

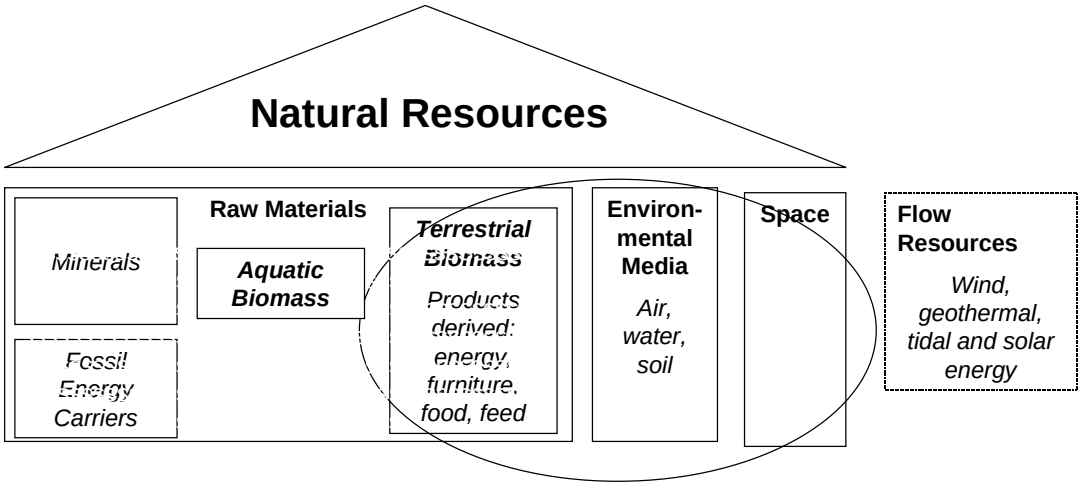


**Figure 1: Initial scope of natural resources covered under NRS**

Following this initial focus, biomass resources under the NRS will be defined as (terrestrial) biomass, produced or extracted from agriculture and forestry (including forestry residues and agricultural residues), and products derived from these sources. Organic waste from other sources and marine resources (fish stocks, etc.) would not be included in the first stage of the standard-setting procedure.

Focusing the approach on biomass resources as outlined above would have several benefits:

- Sustainability standards for a sustainable use of biomass feedstocks are of high political importance, given the world-wide increasing demand for bioenergy.

- The standard developed under the NRS can serve as benchmark for new standard-setting initiatives. The current processes to develop sustainability standards for biofuels do not cover certain crops and feedstocks (e.g. Jatropha, Miscanthus, recycled cooking-oil, etc.).
- A standard which in a first stage only focuses on biomass would require less time for achieving agreement on a set of principles and criteria.
- It will probably be easier in this first stage to assemble stakeholders from the agricultural and forestry sector, rather than to start from the very beginning with stakeholders from different sectors (i.e. mining, fossil energy, etc.).
- The system can be tested and developed, and be further extended at a later stage if it proves successful.

**Minimum or maximum standard**

A crucial issue for the effectiveness, feasibility and potential of the standard, in view of encouraging a growing market segment to implement better management practices for natural resources, is how ambitious and demanding the standard can be. The other question is where to set the bar for acceptable levels of impact. In other words, with lower requirements, the higher market share is likely to be achieved, but at the cost of a lower reduction of social and environmental impacts. One way to avert this conflict is to allow producers a "phasing-in" from baseline standards to premium standards over a certain period of time. However, this approach is not automatically feasible because – as FSC experiences showed – there are huge difficulties entailed in upgrading standards since acceptance of increasing requirements at a later stage is often low among appliers.

Essentially acceptable and non-acceptable levels of impact would need to be defined taking ecosystem capacity and social acceptability as a basis. Despite the mentioned drawbacks the standard could be defined in a way that demands continuous improvements over time right from the beginning (e.g. demanding the reduction of water use in % per year). In this way the standard can have a high market uptake right from the start and will be able to enforce reduction of social and environmental impacts continuously.

**Type of standard**

Standards are usually structured in three levels: principles, criteria and indicators.

Following a logical hierarchy, they allow to make a direct link between what is required in the field and the objectives that the standard seeks to achieve. This hierarchy usually follows from the objectives in a sequence of increasing detail and specificity (see also ISEAL 2007).

- Principles are fundamental statements about a desired outcome. They often provide greater detail regarding the objectives. The criteria and indicators derive from the principles.
- Criteria are the conditions that need to be met in order to achieve a principle.
- Indicators are measurable states which allow the assessment of whether or not associated criteria are being met. The most effective indicators are result based.

Taking up the approach from above with choosing terrestrial biomass as the focus for the standard setting scheme, possible examples for principles and criteria can be as follows (with bullet points being the criteria of the respective principle):

Principle: Conserve biodiversity

- Avoid damage to or destruction of biodiversity.
- No production on areas of high conservation value.
- Protect land adjacent to cultivated land and of high natural value by establishment of buffer zones.
- Prohibit endangered and threatened species from being held in captivity.

Principle: Reduce greenhouse gas emissions (GHG)

- Maintain positive GHG balance along production chain and application (Ecofys 2006).
- Conserve below- and above-ground carbon stocks (e.g. forests and rainforests, peatlands, humus, etc.).

Principle: Respect land rights

- Ensure that land ownership and land rights, including traditional or informal rights, are documented and recognised.
- Involve local people in planning processes concerning land-use changes.

The selection of principles and criteria defines the actual nature of the standard and is therefore highly significant in the standard setting process. Acceptance for the selection can only be achieved through a broad stakeholder participation and knowledge acquirement.

The structure of principles and criteria has achieved demonstrable success in many contexts. However, their impact is not always easily measurable. A main reason for this is that process standards regulate how to do something (such as certain cropping methods or equipment that should be applied, in the case of biomass) leaving the actual result of the practice out of scope. Moreover, the number of criteria and indicators is usually very high and does not prioritize the most important environmental or social impacts of production.

For example, Eurepgap (recently renamed GLOBAL GAP) certification is contingent upon completion and verification by the farmer of a checklist that consists of 214 questions or control points, 49 of which are considered “Major Musts” requiring 100% certification, and 99 of which are considered “Minor Musts” requiring 95% certification. Another 66 are classified as “Should”, which are recommended but not required practices (WWF/ Earley 2006).

In this context, an alternative approach is discussed among experts for standardisation that should provide a more efficient and target-oriented indication of environmental and social performances by focussing on so-called “key impacts”. The idea of key impacts is that among the various environmental and social issues only few major impacts are selected and measured in metrics (by using key indicators). Key indicators are chosen to directly address the selected key impacts, thereby additionally covering other (related) impacts by one representative and meaningful indicator.

An example for key indicator can be “energy productivity per area unit” that would measure all kind of input on land, such as fertilisers, pesticides, energy requirements by machine use, etc., which would then be converted into energy units (e.g. Joule). This would be put in relation to the energy yield of harvested products (input per unit of output), regardless if used for energy, material or food purposes. This indicator therefore allows conclusions about greenhouse gas emissions from fuel consumption, sufficient input of pesticides and fertilisers, and harvest practices. If complemented by information about water used it would also be a meaningful indicator for “resource efficiency”.

The focus on key impacts and indicators will reduce complexity and duplication of effort for stakeholders, which is also crucial for the cost-effectiveness and comprehensibility of the standard (which is particularly relevant for smallholders). Similar key indicators, measuring the same key impacts in different sectors, would also allow to directly compare the impacts of different production systems, e.g. GHG balances for bioenergy feedstocks produced in agricultural or forestry systems.

However, it needs to be assured that the standard is verifiable and provides robust evidence which can be used to report performance. This requires the definition of key metrics which are measurable, linked to impacts, and which can be aggregated over time.

## 4. International requirements to establish a generic standard

The creation of the NRS as a new, internationally legitimated standard in accordance with international trade disciplines will need to meet a range of requirements. Most importantly, it must be designed

along the internationally recognised standard-setting procedures developed by the World Trade Organisation (WTO) within the Agreement on Technical Barriers to Trade (TBT), and by the International Organisation for Standardisation (ISO). Another important organisation that sets requirements for the introduction of international standards is the International Social and Environmental Accreditation and Labelling Alliance (ISEAL), an open-membership association for international social and environmental standard-setting and conformity assessment.

Each of these organisations has established a 'code' by which its members should adhere (see Table 1). Because their membership encompasses the vast majority of states, the Codes of Good Practice, which were established both by ISO and WTO, are binding for international standard initiatives. Both codes address all standardisation bodies, governmental or non-governmental, from the regional to international scale. While the WTO's TBT Agreement mainly focuses on the compatibility of standards with international trade, the ISO guide provides general advice on procedures for the development of standards and participation in the standards-development process.

| **Body** | **Agreement** | **Code** | **Issues addressed** |
|---|---|---|---|
| WTO – World Trade Organisation | Agreement on Technical Barriers to Trade (TBT) | Code of Good Practice for the preparation, adoption and application of standards | - Compatibility of standards in international trade<br><br>- Procedural steps to be taken when adapting a new standard |
| ISO – International Organisation for Standardisation | | Guide 59 - Code of good practice for standardization | - General advice on procedures for the development of standards and participation in the standards-development process |
| ISEAL – International Social and Environmental Accreditation and Labelling Alliance | | Code of good practice for Setting Social and Environmental Standards | - General requirements for the preparation, adoption and revision of standards<br><br>- Credible operating practices |

Table 1: Overview of relevant institutions for international standardisation

Procedural requirements given by the above mentioned codes include a broad involvement of stakeholders, a regular review process when the standard is created, transparency of the whole standard-setting procedure and the consistency of standards with political and economic conditions.

**Implementing the standard**

The actual implementation of the standard could be done in various ways. In particular the standard can be implemented by:

1. certification scheme (visible (label) for the consumer or non-visible (business-to-business standard, etc.)),
2. voluntary guidance on good practice,
3. trade guidelines, codes of conduct (set of rules outlining the responsibilities of, or proper practices for, an individual or organisation) etc.
4. reporting obligations
5. agreements on rules for public procurement,
6. regulation, intergovernmental agreements,

Determining the end-use of the standard has significant impacts on what issues should be included in the standard and how the standard is to be set. A standard made for regulation looks different than one designed for certification. A consumer label usually means that more stakeholders will have an interest in being involved in its development. If demand for uptake of the standard is expected to be

driven by retailers and producers, then their interest needs to be represented by involving them as stakeholders in the standard-development process.

In principle, differing standards between 'like products' (comparable products) can become serious barriers to trade if an exporting country is not able to adhere to standards set by potential importing countries. If, for example, the European Union sets high standards for biofuels and implements them in a mandatory manner, developing countries could be prevented from importing biofuels in the EU when they are not able to adhere to respective requirements. This is likely to run contrary to WTO rules leading to additional conflicts in the WTO negotiations between the EU and respective developing countries.The WTO therefore aims towards a unification of standards for all globally traded commodities. Since the NRS aims towards a voluntary and globally applied standard-setting scheme, obstacles in the form of trade barriers are not to be expected in the early stages. Approaches for implementing the standard in a mandatory way (through regulation or rules on public procurement) require careful adjustments with WTO rules. However, given that the NRS is implemented across nations it bears the potential to be accepted by the WTO since discrimination would be offset.

## 5. Summary and Conclusions

Addressing the exploitation of natural resources world wide will be a challenging task for the future to which an international sustainability standard for the production and use of natural resources can significantly contribute. This paper outlines various options in setting, designing and implementing such a standard. Starting with the choice between the meta-standard approach and a completely new generic standard, decisions have to be made on the requirements and level of performance demanded by the standard. Further research is especially needed to investigate the potential of key impacts approach accompanied by key indicators that might improve effectiveness and applicability in comparison to the conventional standard structure of principles, criteria and indicators.

Decisions on these options are strongly dependent on the stakeholders participating in the development of the standard. To start the setting of the standard it is recommended to first focus on terrestrial biomass as a frontrunner and to extend the scope to a broader range of natural resources at a later stage. Particularly due to the urgency and rising demand for sustainability standards for bioenergy, a generic standard for biomass may see considerable support.

The building of a broad alliance of supporters for developing and carrying forward a generic standard and a NRS standard-setting organisation or initiative is a crucial step for the development of the NRS. These stakeholders will need to be identified in civil society, private sector/industry and potentially (international) intergovernmental organisations and governments. Important partners also need to be found within the existing best-practice standard-setting schemes and initiatives. Also, from the very beginning, a balance must be established between industrialised and developing countries, and both must be involved from the early stages of the debate.

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