

Analysis of Member State RED implementation Final Report (Task 2)



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Date: 13 December 2012

Project number: BIONL11469

This deliverable represents the final report for Task 2 in the context of the project ENER/C1/2010-431 "Study on the operation of the system for the biofuels and bioliquids sustainability scheme".

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Foreword

Utrecht, 05 December 2012

This report describes the way EU Member States have transposed the sustainability and chain of custody requirements for biofuels as laid down in the Renewable Energy Directive (RED) and Fuel Quality Directive (FQD). In the assessment of Member States' implementation, the report mainly focuses on effectiveness and administrative burden. Have Member States transposed the Directives in such a way that compliance with the sustainability criteria can be ensured as effectively as possible? To what extent does the Member States' implementation lead to unnecessary administrative burden for economic operators in the (bio)fuel supply chain? The report focuses specifically on the transposition of the sustainability and chain of custody requirements, not on the target for renewables on transport. This means that for example the double counting provision¹ is not included as part of the scope of this report.

The authors are grateful to all Member State national experts who took the effort to fill in our questionnaire and were available to answer additional questions. Almost all Member State authorities were willing to participate in this study which has led to a comprehensive report.

The authors would also like to thank DG ENER of the European Commission for enabling us to undertake the project. The RED and FQD are the first laws internationally to contain binding sustainability criteria for biofuels. It is important to know whether the criteria have effectively been implemented at a national level without leading to undue administrative burden to economic operators.

¹ RED Article 21(2) contains the provision that biofuels produced from wastes, residues, lignocellulose and non-food cellulose count twice towards national biofuel targets.

Reading guide

This report starts with an introduction covering the implementation of the Renewable Energy (and Fuel Quality) Directive into national legislation, the methodology by which Member States were assessed against effectiveness and administrative burden and the categorisation of Member State's national systems for RED-implementation (Chapter 1). The report continues with a high level description of each Member State system assessed (Chapter 2). Following this, the report includes analysis of the Member States on the effectiveness and administrative burden of a number of key ("major") measures (Chapter 3). The final chapter presents the conclusions and recommendations (Chapter 4).

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1 Introduction

This deliverable represents the final report for Task 2 in the context of the project ENER/C1/2010-431: "Study on the operation of the system for the biofuels and bioliquids sustainability scheme".

1.1 Implementing the RED and FQD into national legislation

The Renewable Energy Directive (RED)² is the first piece of legislation worldwide which contains mandatory sustainability and mass balance criteria for biofuels. An identical set of requirements is included in the Fuel Quality Directive (FQD)³. This report mainly focuses on the implementation of the RED but where this report refers to the 'RED sustainability criteria', in fact the 'RED and FQD sustainability criteria' are meant. The transposition period during which Member States had to transpose the RED requirements into national legislation for the RED ended on 5 December 2010, while the transposition time for the FQD ended on 31 December 2010. As becomes clear from our analysis, most Member States did not meet these deadlines. At the time the research for this report was conducted, in February-June 2012, most Member States had implemented the biofuels criteria into national legislation. This report describes, categorises and assesses the way Member States have implemented the criteria. The assessment is based on input provided by Member States' policy makers to whom questionnaires were sent with questions on the way their Member State implemented the RED.

Member States have implemented the RED in various ways. In part this is due to the nature of the legislation, being a Directive rather than a Regulation or a Decision, which leaves more flexibility for Member States to transpose the EU legislation according to their own interpretation. However, the flexibility Member States have for interpretation is limited by the fact that all RED-requirements should be properly implemented and the fact that sustainability criteria cannot go further than those in RED Articles 17(2) to 17(5).

1.2 Assessment methodology

In order to obtain information on the national implementation of the RED sustainability scheme for biofuels, Ecofys and IEEP drafted a questionnaire which was sent to the relevant policy makers in each Member State (Table 1). The questionnaire covered the key features of RED implementation, including: when the RED was implemented; what information economic operators should report to the authorities; existence of a penalty system for non-compliance; specific requirements for verifiers

² Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009

³ Directive 2009/30/EC of the European Parliament and of the Council of 23 April 2009

and verification; mass balance rules; and what options economic operators have to demonstrate compliance with the criteria.

These and further aspects covered by the questionnaire were assessed and interpreted as measures of effectiveness, administrative burden or both; meaning they influence either the effectiveness of a Member State's RED implementation in ensuring that biofuels meet the EU sustainability and chain of custody criteria or the extent to which Member States implementing systems lead to unnecessary administrative burden for obligated parties. We have categorised measures as having either a "major" or "minor" impact on Effectiveness (E) and Administrative Burden (AB). Major measures have a large influence on whether a Member State's RED implementation is effective, or does not lead to unnecessary administrative burden. Minor measures have a smaller impact on the assessment. An overview of major and minor measures is provided in section 3.1.

Whether a Member State has implemented the RED requirements has a large impact on effectiveness, as without implementation sustainability criteria are not legally binding. Only if a Member State has no biofuels mandate, no fiscal incentive or other stimulus in place, then a later implementation date does not reduce effectiveness, but it seems all Member States who did not meet the implementation deadline had some form of stimulus for biofuels in place and should therefore have implemented the sustainability criteria. Another important effectiveness indicator concerns the reporting requirements for economic operators since without sufficient information on the biofuels supplied it is difficult for Member States to monitor compliance with the RED requirements. The list of information items included in Question 12 of Table 1 is considered to be the minimum to ensure effectiveness. The items are a combination of what's required by the RED, FQD and the European Commission in Decision (2011/13/EU), as well as other necessary items such as quantity of biofuels supplied. A robust penalty system is crucial to ensure effectiveness, since if for instance fines for non-compliance are insignificant then there is no sufficient deterrent against unlawful behaviour by economic operators. Another major effectiveness indicator is the extent to which the mass balance requirements are fully implemented, since only a proper functioning mass balance can ensure the correct flow of sustainability information through the supply chain.

A major indicator for administrative burden for economic operators is whether a Member State has introduced a transition period during which not all requirements need to be fully complied with by economic operators. Such a transition period allows economic operators to get used to the requirements and adapt their systems and ways of operating. Another relevant indicator is whether economic operators have to report to one administrative body or to several; the latter would unduly increase the administrative burden. The same is true if not only the economic operators who supply biofuels to the transport market have to report to the authorities but also parties further up the chain. Another important element which determines the administrative burden is the question what information economic operators have to report on. More reporting items to a certain extent increases the effectiveness of a Member State system but it also increases the administrative burden for economic operators. Another element to consider is the length of the mass balance period, if the period is shorter than three months then administrative burden is negatively impacted without a large gain in effectiveness. And finally, the more options a Member State offers to economic

operators to demonstrate compliance, the lower the administrative burden as operators can choose the option that best suits their operations.

The assessment undertaken here is a qualitative one. We do not derive final overall scores for effectiveness and administrative burden based on the individual responses and their scoring. **The effectiveness and administrative burden assessment should not be confused with an assessment of correct or incorrect legal transposition of the RED requirements.**

In order to score E and AB, performance is compared to the baseline of the relevant RED and FQD requirements. A Member State can score better than the baseline (E or AB), worse than the baseline (E or AB), or in line with the baseline (E or AB). The majority of the questions are relevant for either effectiveness, administrative burden or both. If a certain question is not relevant for the assessment of effectiveness and administrative burden, but rather provides additional information on the implementation of the RED sustainability criteria in Member States, this is indicated by a hyphen (-). If a Member State has not yet implemented a certain specific point the E or AB field is marked 'unable to assess'. If a Member State has not provided any information fields are marked 'not available'. If a Member State only allows voluntary schemes to demonstrate compliance with the biofuels sustainability and chain of custody criteria the fields are marked 'not applicable' – this is only relevant for Questions 17, 20 and 22 since the guidance referred to in these questions is covered by the voluntary scheme and not by Member State implementation regulations. Judging whether the guidance provided by the voluntary schemes used in the EU-27 is appropriate is not part of this study.

The table below provides an overview of the measures of E and AB, how they link to the questionnaire questions and their scoring rationale. Note that we do not include the rationale for scoring in line with the baseline (E or AB), as these logically follow from the rationales for the better or worse than the baseline scores (with the exception of Question 2).

Table 1: Overview of measures of AB and E and their scoring rationale

No.	Questions to Member State	Question relevant for E, AB, both or not relevant (-)	Effectiveness and Administrative Burden E / AB means MS policy increases effectiveness or administrative burden, E / AB means the opposite. E and AB means the score is neutral (- means not relevant).
	High level questions		
1	What is the name of the legislation that implements the sustainability scheme of the Renewable Energy Directive (RED)? Please provide a URL link if possible? Is the RED sustainability scheme integrated into existing legislation? If so, please provide details.	-	-
2	What is the date of implementation of the RED mandatory sustainability requirements?	effectiveness	E if directives were implemented by 5 Dec 2010 E if directives are not yet implemented by 5 Dec 2011 E if implemented between 5 Dec 2010 and 5 Dec 2011
3	Is there / was there a transition period with "lighter" requirements? If so, please provide details.	both	E if transition period is introduced prior to full implementation of the sustainability criteria then this reduces the effectiveness AB if transition period is introduced during which period economic operators have less obligations compared to full RED compliance AB if transition period is introduced during which period economic operators have more obligations compared to full RED compliance
4	Are the mandatory sustainability elements of the Fuel Quality Directive implementation integrated with the implementation of the RED?	-	-
5	Are measures being taken to harmonise the sustainability requirements with other Member States (either EU-wide or via agreements with individual Member States)? If so, please provide details.	-	-
6	Are there differences between the requirements for domestic, EU and imported <i>feedstock</i> ? If so, please provide details.	both	AB if compliance with the land-related sustainability requirements for domestic feedstocks is aligned with the CAP and no certification of feedstock production through voluntary schemes is needed AB if more stringent rules apply for imported biofuels compared to domestic biofuels E <i>not affected</i> if requirements for domestic feedstocks are OK (i.e. in line with the RED) but for imported feedstocks are more stringent E if sustainability of domestic feedstocks does not need to be independently verified

No.	Questions to Member State	Question relevant for E, AB, both or not relevant (-)	Effectiveness and Administrative Burden E / AB means MS policy increases effectiveness or administrative burden, E / AB means the opposite. E and AB means the score is neutral (- means not relevant).
7	Are there differences between the requirements for domestic, EU and imported biofuel <i>producers</i> ? If so, please provide details.	both	AB if more stringent rules apply for imported biofuels compared to domestic biofuels E if sustainability of domestic produced biofuels doesn't have to be independently verified
	Compliance and reporting		
8	Which body/bodies is/are responsible for administering the systems to collect information on compliance with RED sustainability criteria?	-	-
9	If different, which administrative body do economic operators report to?	administrative burden	AB if economic operators have to report to more than one authority (<i>sometimes the answer was provided under question 8</i>)
10	Which economic operator(s) in the biofuels supply chain have to demonstrate compliance with the RED sustainability criteria and at which point in the supply chain do they report? (e.g. economic operator who pays the fuel duty at the fuel duty point)? [EC Comm., 2010/C 160/02, 2.1, paragraph 2]	administrative burden	AB if not only fuel suppliers at the end of the chain (obligated parties) have to demonstrate compliance but also actors further up the biofuel supply chain
11	How often do economic operators have to report (verified) sustainability information?	both	AB if economic operators have to report more than once a year AB if economic operators have to report less than once a year E if economic operators have to report less than once a year E if economic operators have to report more than once a year since it reduces the chance that non-compliance is only identified at the end of the year
12	What information do economic operators have to report? [RED Article 18.3]	both	AB if more reporting items are mandatory than the following: quantities, biofuel type, feedstock, GHG-performance and country of origin of feedstocks, as well as which voluntary scheme (VS) used (if appropriate), NUTS 2 region for EU feedstocks, land use in January 2008 if no VS is used, degraded land bonus (if used – as per RED Annex V.C point 8), soil carbon accumulation factor (if used – as per RED Annex V.C point 7 and further laid down in Decision (2011/13/EU) on information to be submitted to MSs) E if all abovementioned items are reported or if all but except one of the items are required, the exception not being quantities or GHG-performance E if two or more of the above mentioned reporting items are not required or if no reporting is required on either quantities or GHG-performance
13	In what format do economic operators report? (e.g. Custom-made database, MS Excel, paper format, no standard format, or other?)	both	AB if standardised template is provided, economic operators do not need to invent the wheel themselves E if standardised template is provided since it reduces the chance of incomplete and low

No.	Questions to Member State	Question relevant for E, AB, both or not relevant (-)	Effectiveness and Administrative Burden E / AB means MS policy increases effectiveness or administrative burden, E / AB means the opposite. E and AB means the score is neutral (- means not relevant).
			quality reporting
14	Are any penalties in place for non-RED compliance? If so, please provide details?	effectiveness	<p>E if a penalty regime is in place that deters economic operators from non-compliance (e.g. fine-system, EO being excluded from system)</p> <p>E if no penalty regime is in place that deters economic operators from non-compliance</p>
	Questions targeted at the Land criteria of the RED sustainability scheme		
15	<p>Regarding the overall approach to demonstrating compliance with the land-related criteria, which of the following options are available to economic operators (please indicate all that apply):</p> <ul style="list-style-type: none"> - EC-recognised voluntary schemes? - Bilateral or multilateral agreements made by the EC (none at present)? - Voluntary schemes recognised by the Member State? If so, please provide details. - Voluntary schemes recognised by other Member States? - National systems of other Member States? - CAP / Cross compliance implementation? If so, please provide details. - Verified information provided directly to the Member State (not as part of a voluntary scheme)? - Other? (please specify) <p>[EC Comm., 2010/C 160/02, 2.1, paragraph 1]</p>	both	<p>AB if Member State (MS) accepts VS accepted by other MS or CEN norm, or national systems of another MS</p> <p>E if MS accept each other's NS or VS without checking themselves whether they meet the requirements of their own national system</p> <p>AB if compliance with land criteria for EU feedstocks follows from compliance with CAP rules</p> <p>AB if Member States give multiple ways to demonstrate compliance (in addition to EC-recognised schemes, bilateral and multilateral agreements)</p> <p>E if no verification required of the information reported to MS (this holds for economic operators reporting information on the VS they use, as well as verifying self-declaration-type information such as on land use in Jan 2008)</p>
	Questions targeted at the GHG criteria of the RED sustainability scheme		
16	<p>Regarding the overall approach to demonstrating compliance with the GHG criteria, which of the following options are available to economic operators (please indicate all that apply):</p> <ul style="list-style-type: none"> - EC-recognised voluntary schemes? - Bilateral or multilateral agreements made by the EC (none at present)? - Voluntary schemes recognised by the Member State? If so, 	both	See under Q15

No.	Questions to Member State	Question relevant for E, AB, both or not relevant (-)	Effectiveness and Administrative Burden E / AB means MS policy increases effectiveness or administrative burden, E / AB means the opposite. E and AB means the score is neutral (- means not relevant).
	<p>please provide details.</p> <ul style="list-style-type: none"> - Voluntary schemes recognised by other Member States? - GHG calculation tool that allows the calculation of actual values (outside of a voluntary scheme)? Please provide name of tool and URL where applicable. - National systems of other Member States? - Verified information provided directly to the Member State (not as part of a voluntary scheme)? - Other? (please specify) <p>[EC Comm., 2010/C 160/02, 2.1, paragraph 1]</p>		
17	<p>Are GHG emission calculation rules for economic operators available? Please provide URL where applicable. [RED, Annex V, section C; EC Comm., 2010/C 160/02, Annex II]</p>	both	<p>AB and E if guidance is provided for the calculation of GHG actual values in addition to the guidance provided in the RED/FQD. Guidance is preferably consistent with the BioGrace calculation rules (even better if a tool is provided or a reference to the BioGrace tool)</p> <p>E if no guidance is given for calculating actual values due to risk of 'cherry-picking' conversion factors</p> <p>If <u>only</u> VS are allowed, the guidance provided by the VS will be used and no additional guidance from MS can be expected. E and AB fields will be marked 'not applicable'</p>
18	<p>Is the averaging/aggregation of GHG emission data for biofuel batches permitted? If so, please provide details. (e.g. average of any biofuel batches that meet the minimum GHG savings threshold, lowest performing batch etc) [EC Comm., 2010/C 160/01, 2.2.3, paragraph 6, footnote 8]</p>	administrative burden	AB if averaging is allowed
Questions targeted at the Mass balance rules of the RED sustainability scheme			
19	<p>Regarding the overall approach to demonstrating RED compliance, do economic operators explicitly have to demonstrate compliance with the mass balance rules? If so which options are available (please indicate all that apply):</p> <ul style="list-style-type: none"> - EC-recognised voluntary schemes? - Bilateral or multilateral agreements made by the EC (none at present)? - Voluntary schemes recognised by the Member State? If so, 	both	See under Q15

No.	Questions to Member State	Question relevant for E, AB, both or not relevant (-)	Effectiveness and Administrative Burden E / AB means MS policy increases effectiveness or administrative burden, E / AB means the opposite. E and AB means the score is neutral (- means not relevant).
	<p>please provide details.</p> <ul style="list-style-type: none"> - Voluntary schemes recognised by other Member States? - National systems of other Member States? - Verified information provided directly to the Member State (not as part of a voluntary scheme)? If so, please provide details. - Other? (please specify) <p>[EC Comm., 2010/C 160/02, 2.1, paragraph 1]</p>		
20	<p>Are specific requirements or guidelines set for the operation of the mass balance system? If so, please forward, or indicate where they can be found (e.g. URL link)?</p> <p>Please provide details, specifically related to (and specify whether they are requirements or guidelines):</p> <ul style="list-style-type: none"> - Timeframe over which the balance in the system needs to be achieved? - How sustainability information is allocated to consignments? - The "level" that the mass balance is operated at (e.g. site level, company level)? <p>[RED, Article 18.1; EC Comm., 2010/C 160/01, 2.2.3]</p>	both	<p>E if guidance is given on how to operate mass balance in the context of a MS NS or if a MS recognises other MS NS</p> <p>E if no guidance on MB is given or if no timeframe for MB is set in the context of a MS NS or if a MS recognises other MS NS</p> <p>AB if mass balance timeframe is shorter than 3 months</p> <p>E if mass balance timeframe is shorter than one year since it reduces the chance that non-compliance is only identified at the end of the reporting year</p> <p>AB if mass balance is not operated at a site level</p> <p>E if mass balance is not operated at a site level</p> <p>E if mass balance is operated at site level</p> <p>If <u>only</u> VS are allowed, the guidance provided by the VS will be used and no additional guidance from MS can be expected. E and AB fields will be marked 'not applicable'</p>
21	<p>If known, what have been the key challenges for economic operators with the operation of the mass balance system to date?</p>	-	-
	<p>Questions targeted at the Verification aspects of the RED sustainability scheme</p>		
22	<p>What are the requirements for verifiers who check the information reported by economic operators? Is there a specific accreditation/approval process for verifiers?</p> <p>[EC Comm., 2010/C 160/01, 2.2.2]</p>	effectiveness	<p>E if guidance is given on how to operate verification in the context of a MS NS or if a MS recognises other MS NS</p> <p>E if no independent audit is required</p> <p>E if a NS has been developed without specific requirements for verifiers.</p> <p>If <u>only</u> VS are allowed, the guidance provided by the VS will be used and no additional guidance from MS can be expected. E and AB fields will be marked 'not applicable'</p>

1.3 Categorising EU Member States' RED-implementation systems

When looking at the different ways Member States have implemented the RED sustainability criteria, two main categories can be distinguished: national systems and voluntary scheme based systems. For the purposes of this report, we define a national system as a bespoke system developed by a Member State to enable economic operators to demonstrate compliance with the RED. While a publicly set up national system will include the possibility of using (privately developed) voluntary schemes as a way of showing compliance (e.g. voluntary schemes recognised by the European Commission can be used in all national systems), it will provide additional compliance mechanisms: this may include for example the possibility for economic operators to provide verified sustainability information directly to Member State authorities or the mapping of national (agricultural) land into areas that comply with the land related sustainability criteria and those that do not. We define a voluntary scheme based system as a system in which only voluntary schemes can be used to demonstrate compliance with the RED⁴. These voluntary schemes are generally developed by private parties.

In summary, we categorise the Member States' RED implementation in either national systems or voluntary scheme based systems, both of which have two subcategories:

(1) Member States that only allow the use of voluntary schemes (EC-recognised or Member State recognised) to demonstrate compliance with the RED requirements;

(A) Voluntary scheme based systems in which economic operators report information to the authorities and compliance is achieved *as biofuels pass the duty point*⁵.

(B) Voluntary scheme based systems where economic operators report information into an electronic database, which is checked by Member State authorities *prior to passing of the duty point*. This can occur if sustainability information has to be reported in an electronic register operated by the national authority prior to the duty point.

(2) Member States that allow the use of voluntary schemes and have developed a 'national system' for economic operators to demonstrate compliance with the RED requirements;

(A) National systems based on ex-post verification of actual data provided by economic operators. This means that fuel suppliers collect sustainability data from the preceding stages in the supply chain and have it ex-post verified, i.e. *after* the biofuels have been applied past the point of compliance, verified by an independent auditor.

(B) National systems that link compliance with the RED requirements to the Common Agricultural Policy (CAP) requirements, i.e. cross compliance, possibly combined with compliance with national nature protection legislation, or introduced land zoning based on RED-compliant areas and non-RED compliant areas.

⁴ Note that in our categorisation of a voluntary scheme based system, the use of other Member States' national systems could be accepted as a way to demonstrate compliance, as well as bilateral or multilateral agreements made by the EC (none at present).

⁵ I.e. the point at which the fuel supplier needs to pay excise fuel duty, usually when the transport fuel is released for consumption by end users.

The table below classifies the EU Member States' RED-implementation systems according to the above-mentioned categories. Member States who have not yet implemented the RED sustainability provisions are labelled 'Unable to assess since implementation not finalised'. Member States for which no data is available are labelled 'No information available'. The classification in the table is based on our current understanding of Member State RED implementation.

Table 2: categorisation of EU Member State RED implementation systems

Classification of EU Member State RED-compliance mechanisms				
Member State	1A: VS based, duty point compliance	1B: VS based, pre-duty point compliance	2A: NS, ex-post verification based compliance	2B: NS, Cross compliance/nature protection legislation/zoning based compliance
Austria				
Belgium				
Bulgaria	Unable to assess since implementation not finalised			
Cyprus	Unable to assess since implementation not finalised			
Czech Republic				
Denmark				
Estonia	VS based but no compliance check ⁶			
Finland	Unable to assess since implementation not finalised			
France				
Germany				
Greece	Unable to assess since implementation not finalised			
Hungary				
Ireland				
Italy				
Latvia				
Lithuania	VS based but no compliance check ⁷			

⁶ Estonia does not currently have a biofuels mandate or tax credit system. Therefore, currently hardly any biofuels are being brought onto the market. No reporting requirement and no verification requirement for fuel suppliers exist. This is likely to change with the expected introduction of a biofuel mandate in 2015. Estonia does consider introducing an ex-post verification based national system.

⁷ Lithuanian economic operators have to report to the authorities on the quantities of biofuels supplied to the market. Although Lithuania requires the use of voluntary schemes to demonstrate compliance with the sustainability criteria, no reporting is required on this issue. The Lithuanian authorities assume all biofuels supplied to be sustainable because all 17 Lithuanian biofuel (feedstock) producers are ISCC certified.

Classification of EU Member State RED-compliance mechanisms				
Member State	1A: VS based, duty point compliance	1B: VS based, pre-duty point compliance	2A: NS, ex-post verification based compliance	2B: NS, Cross compliance/nature protection legislation/zoning based compliance
Luxembourg	No information available			
Malta				
Netherlands	Likely to become 1B in later years (electronic register in development)			
Poland	No information available			
Portugal				
Romania				
Slovakia				
Slovenia	No information available			
Spain	Unable to assess since implementation not finalised			
Sweden ⁸				
United Kingdom				

Member States' RED implementation was assessed on the basis of whether implementation is effective and does not lead to unnecessary high administrative burden for economic operators, as per the methodology detailed above in section 1.2.

⁸ The Swedish system for demonstrating compliance with the sustainability criteria can be classified as a voluntary scheme based system, however one that partly resembles a national-system like approach.

2 Description of MS RED implementation

This chapter contains a brief description of the Member States' implementation of the RED sustainability criteria⁹. The completed questionnaires with the effectiveness and administrative burden scores, along with a rationale for the scores are provided in a separate annex.

2.1 Austria¹⁰

Austria is still in the process of finalising its RED-implementation. The two main legal implementing Orders are the (1) *Verordnung Landwirtschaftliche Ausgangsstoffe für Biokraftstoffe und flüssige Biobrennstoffe*, which contains the sustainability criteria and guidelines on how Austrian feedstocks can comply and the (2) *Kraftstoffverordnung*, which contains the obligations for fuel suppliers, imported feedstocks, RED GHG-threshold and calculation rules as well as details on double counting. While the first Order has been in force since December 2010, the *Kraftstoffverordnung* is still awaiting political approval.

Austria has developed a national system for biofuel feedstocks produced inside Austria. This means that economic operators can not only use voluntary schemes to demonstrate compliance with the sustainability criteria but in addition a national system has been developed to demonstrate compliance. In Austria this system is based on cross compliance with relevant CAP requirements and compliance with relevant nature protection legislation. Farmers can demonstrate compliance with the land related RED sustainability criteria by demonstrating compliance with relevant CAP rules as well as the Austrian nature protection legislation. Biofuel producers have to be certified annually by the Umweltbundesamt, the Austrian Nature Protection Agency. Fuel suppliers who supply biofuels produced outside Austria can either use voluntary schemes or other Member States' national systems to demonstrate compliance with the sustainability criteria. Austria is willing to accept other Member States' national systems and is likely to recognise at least the German, Hungarian, Slovak and Czech national systems. Once implementation is finalised, Austria will request information on how these systems work before accepting them, but it seems no formal assessment will be made on whether the systems are in line with the RED criteria.

Economic operators who have to demonstrate compliance with the sustainability criteria and the mass balance system to the authorities are fuel suppliers at the end of the supply chain. Fuel suppliers have to report once a year to the Umweltbundesamt, the Austrian Nature Protection Agency, from 2012 onwards. Agrarmarkt Austria (AMA) is responsible for the RED land criteria (RED

⁹ Austria, Luxembourg and Poland have indicated that they will not be submitting a questionnaire, while at the time of writing a completed questionnaire from Slovenia had still not been received.

¹⁰ The description of the Austrian national system is based on existing Ecofys/IEEP knowledge.

Articles 17(3) to 17(5)). The Umweltbundesamt will administer an electronic biofuel register that is currently being developed.

Verifiers do not need to be accredited in order to verify biofuels for the Austrian market. Checks are performed in the context of the CAP 'Single payment scheme', whereby 5% of Austrian farmers are checked annually. If the 5% is found to be in compliance than all farmers that produce biomass for biofuels are deemed in compliance. If however issues arise during the checks, the control group is not increased but action is taken only against the farm where issues have been identified. AMA performs the CAP-related checks themselves, whereas independent auditors perform checks on imported biofuels or biofuel feedstocks only.

2.2 Belgium

The Belgian royal decree implementing the RED sustainability criteria came into force in December 2011. The decree designates a transitional period for 2011 and 2012 during which biofuels produced from raw materials harvested in 2011 and 2012 are deemed sustainable in the sense of the decree without actual checking. The implementation of the RED and FQD sustainability criteria is integrated in Belgium.

The Belgian system is a voluntary scheme based national system. This means that economic operators can only use voluntary schemes to demonstrate compliance with the sustainability criteria (as well as other Member States' national systems). This can include both schemes recognised by the European Commission as well as other voluntary certification schemes developed in line with the EN 16214 standard and approved by the Belgian Ministry for Health, Food Chain Safety and Environment. Belgium also recognises the CEN standard EN 16214 as a voluntary scheme to demonstrate compliance with the sustainability criteria¹¹. Voluntary schemes recognised by other Member States, or national systems of other Member States are accepted as proof of compliance if they are in line with requirements for certification systems as spelled out in Belgian law. Furthermore, for feedstocks cultivated in the EU, Belgium accepts compliance with the RED land criteria (i.e. no conversion of high biodiversity land, high-carbon stock land and peatland) to be automatically covered by the Directives 79/409/CEE and 92/43/CEE (i.e. the Birds and Habitats directives). Compliance is considered to have been verified by the Belgian authorities in charge of environment/agriculture and by the corresponding competent authorities in other EU Member States. There are additional reporting requirements for economic operators in third countries on the issues listed in RED Article 17(7), i.e. the ratification and implementation of listed ILO Conventions¹² and of the Cartagena Protocol on Biosafety and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

¹¹ It is noted here that Belgium legally accepts every CEN standard which has been developed.

¹² See RED Article 17(7) for the International Labour Organisation Conventions referred to.

Economic operators who have to provide proof of compliance with the sustainability criteria and the mass balance system to the authorities are fuel suppliers who supply fuels past the duty point. They have to report sustainability information for every consignment to the Ministry of Health, Food Chain Safety and Environment. Reporting items include: the date of issue; the identity of the biofuel producer; the quantity of biofuels delivered; the product description; the GHG emission reduction; the country of origin of the biomass; information on compliance with the sustainability criteria and the means of proving this compliance.

No guidelines are given for the operation of the mass balance system, or the calculation of GHG values. Verifiers who check the information reported by economic operators are subject to accreditation and agreement by the Ministry of Environment.

2.3 Bulgaria

While the Bulgarian Energy from Renewable Sources Act was implemented in May 2011, the secondary legislation under this Act concerning the implementation of the sustainability scheme is still under development by the Ministry of Environment and Water. International and national voluntary schemes that are recognised by the European Commission (as well as eventually bi- and multilateral agreements) may be used to demonstrate compliance in the absence of national secondary legislation implementing the sustainability scheme. The implementation of the RED and FQD sustainability criteria will be integrated. No differences exist in the requirements for domestic, EU and non-EU feedstocks or biofuel producers. Because of the fact that the relevant secondary legislation was neither adopted nor fully developed at the time of the questionnaire, the analysis of the Bulgarian system is incomplete.

Various actors in the supply chain will have to report sustainability information; the public body responsible for collecting them is yet to be determined, nor is the frequency of reporting by economic operators. Information to be reported includes the quantities, feedstock used, origin of feedstock as well as its price. The format for reporting (National Information System) is still under development.

It is not yet determined whether verifiers who check the information reported by economic operators must undergo a certain accreditation process. Guidelines on the operation of the mass balance system or the calculation of GHG values are not yet available.

2.4 Cyprus

The transposition of the RED sustainability scheme in Cyprus was not completed at the time of completing the questionnaire, but the Cypriot Government confirmed that it will be completed by the end of 2012. This means that the analysis of the Cypriot system remains incomplete. The provisions of the sustainability criteria of biofuels and bioliquids will be transposed to the law on the specifications of oil products and fuels (i.e. integrated implementation of RED and FQD sustainability

criteria). Several routes for demonstrating compliance will be accepted, including the use of national systems of other Member States and voluntary schemes accepted by other Member States according to their national scheme, but only if a relevant sustainability certificate has been issued for each batch of biofuels. Implementation of the RED and FQD sustainability criteria will be integrated. No differences are foreseen in the requirements for domestic, EU and non-EU feedstocks or biofuel producers.

Economic operators who have to demonstrate compliance with the sustainability criteria and the mass balance system will be fuel suppliers at the end of the supply chain. They will report to the Energy Service of the Ministry of Commerce, Industry and Tourism to demonstrate compliance with both the RED and the FQD.

Requirements for verifiers who check the information reported by economic operators as well as guidelines for the operation of the mass balance system and GHG calculation rules are not yet available.

2.5 Czech Republic

The sustainability requirements were implemented in the Czech Republic in January 2012. There was no transition period. The implementation of the RED and FQD sustainability criteria is integrated in the Czech Republic. The Czech system can be classified as a voluntary scheme based system.

Certification bodies accredited by the Czech institute of accreditation can receive authorisation from the Ministry of Environment to certify economic operators. Apart from voluntary schemes recognised by the European Commission, voluntary schemes accepted by other Member States, as well as national systems of other Member States are also accepted as ways of showing compliance with the sustainability criteria. No differences exist in the requirements for domestic, EU and non-EU feedstocks or biofuel producers.

Economic operators who have to demonstrate compliance with the sustainability criteria and the mass balance system are fuel suppliers at the end of the supply chain. They have to report once per year to the Ministry of Environment. The information they need to provide includes biofuel and fossil fuel quantities, biofuel type including the feedstock, GHG performance, country of origin and purchase of biofuels. There is no standardised format for reporting.

Verifiers have to obtain accreditation from the Czech institute of accreditation, based on standard ČSN EN 45011. Guidelines on GHG calculation have been published, including a reference to the BioGrace methodology. Requirements for the operation of the mass balance system have been specified including high-level guidelines.

2.6 Denmark

Denmark has transposed the RED and FQD sustainability criteria in the *Sustainable Biofuels Law* and the *Order on Biofuels Sustainability*. In addition, the Danish Energy Agency (DEA) has published a *Handbook for the documentation of the sustainability of biofuels*, which provides detailed guidance for economic operators on how to achieve RED/FQD compliance. The implementation of the RED/FQD sustainability criteria entered into force on 1 January 2010. The *Handbook* was published in July 2011 and took immediate effect.

The Danish implementation is a national system based on ex-post verification of actual data. This means that in addition of using voluntary schemes, Denmark allows economic operators to demonstrate compliance by gathering actual sustainability data from their supply chain and have those ex-post verified by an independent auditor. Verifiers have to use the ISAE 3000 standard for verification and there is no obligation for them to be accredited.

Economic operators who have to demonstrate compliance with the sustainability criteria and the mass balance system to the authorities are fossil fuel refiners and importers who supply fuel to the Danish transport market, which in fact are two types of fuel suppliers who bring fuels past the duty point. Fuel suppliers have to report to the DEA. Reporting takes place on an annual basis and although no harmonised reporting template is provided, the *Handbook* provides guidance on how and what to report. Mandatory reporting items are quantities, biofuel type, feedstock, country of origin of the feedstock, country of purchase of the biofuel, NUTS 2 region (if EU feedstock), voluntary schemes used and carbon intensity.

No differences exist in the requirements for domestic, EU and non-EU feedstocks or biofuel producers. Denmark does provide additional guidance on mass balance and the calculation of actual GHG values which is relevant since Denmark allows for ex-post verification of sustainability data as an additional way of demonstrating compliance apart from the use of voluntary schemes, which already contain guidance on mass balance and GHG calculations.

2.7 Estonia

Estonia implemented the sustainability criteria in December 2010. Although no official transition period has been introduced, a de facto transition period exists during which economic operators do not have to report information to the authorities and not have to demonstrate compliance with the sustainability and chain of custody requirements. Reporting will be obligatory once a biofuel mandate has been introduced, which is scheduled for 2015 and possibly already in 2013. Economic operators are likely to have to report to the Environmental Board, which falls under the Ministry of Environment. Estonia accepts voluntary schemes recognised by the European Commission as well as national systems of other Member States. Estonia does not check other Member States' national systems prior to accepting them. No requirement for verification currently exists.

Estonia does not require an independent audit of sustainability information. Once a biofuel mandate is introduced as well a reporting obligation for economic operators, it is likely that Estonia will also introduce a requirement for an independent audit.

2.8 Finland

Legislation to implement the RED and FQD sustainability criteria for biofuels is still under development in Finland. A legislative proposal is expected to gain approval in the summer of 2012 and could enter into force in 2013. The proposal contains the EU sustainability criteria at high level and a transition period for 2013 during which economic operators do not have to comply fully with all requirements. A Decree will probably follow which will contain more detailed provisions of the Finnish implementation system. Fuel suppliers will be required to report annually and demonstrate compliance with the sustainability criteria to the authorities, probably to the Energy Market Authority. It has not yet been decided what information needs to be reported. Fuel suppliers can use EC-recognised voluntary schemes to demonstrate compliance with the sustainability criteria. In addition, ex-post verification of actual reported data will probably be allowed as a way to demonstrate compliance. National systems of other Member States will not automatically be accepted by the Finnish authorities, though the exact acceptance process remains unclear. Independent verifiers will have to be accredited by the Finnish Accreditation Council.

2.9 France

The sustainability requirements were implemented in France in November 2011. A transition period was in place until May 2012 during which economic operators had to provide evidence that they intended to join a voluntary scheme or to use the services of independent auditors. They were granted time until 31 December 2012 to provide ex-post evidence of independent certification of sustainability. The implementation of the RED and FQD sustainability criteria is integrated in France. The French system can be classified as a national system with ex-post verification based compliance. In addition to using voluntary schemes recognised by the European Commission, it gives the option for fuel suppliers to provide verified information to the Ministry of Energy and Ecology. After the transition period, a national body will be identified (not yet done) to whom fuel suppliers will report. This private operator is anticipated to be financed by the revenue from a tax on biofuels, but this financial system is yet to be implemented and it is anticipated that this will still take one or two years. The 'national system' option will be available for French biofuel (and raw material / semi-products) producers only.

Economic operators who have to demonstrate compliance with the sustainability criteria are fuel suppliers, who benefit from a tax reduction depending on the incorporation rate of biofuels. They report to the Customs Authority; within the framework of the French national system (i.e. applying to those economic operators not using a voluntary scheme) it is the Ministry in charge of energy and ecology that can collect data at each stage of the supply chain (systematically during controls) as

long as the body responsible for the management of the sustainability system has not been identified. Reporting takes place on an annual basis. Reporting items include quantity, type and origin of biofuels or feedstock, GHG performance, voluntary scheme used, as well as whether the sustainability criteria related to land use are respected. The information is registered in a custom-made database and MS Excel.

Some detailed additional guidance is provided for the operation of the mass balance system or the GHG calculation and dedicated guidance is available for the implementation of the national regulation. In the context of calculating GHG performance, it is mentioned that economic operators can use French regional default values available for five feedstocks (wheat, rapeseed, sunflower, beet, maize). Verifiers who check the information reported by economic operators will be recognised by the Ministry of Energy and Ecology, through a validation procedure ("agrément") and later an accreditation procedure. This will be based on a list of relevant norms, including ISAE 3000.

2.10 Germany

The German Federal Government transposed the RED and FQD sustainability criteria into national legislation through the Biofuels Sustainability Ordinance (Biokraft-NachV) and the Biomass-electricity-sustainability Ordinance (BioSt-NachV). The Biokraft-NachV and the BioSt-NachV enter into force on 2 November and on 24 August 2009 respectively for all provisions excepting provisions § 24 (partial proof of sustainability) and § 34 (2) (procedures to recognise voluntary certification schemes) which came into force on 1 January 2010. The Ordinances apply for biofuels supplied to the German market and bioliquids used for electricity generation from 1 January 2011.

The German sustainability system is a voluntary scheme based system. Fuel suppliers are required to demonstrate compliance with the sustainability criteria and mass balance requirement by using voluntary schemes. The Federal Office for Agriculture and Food (BLE) approves voluntary schemes. Germany also accepts voluntary schemes approved by the European Commission or other EU Member States. The registration procedure of economic operators who are participants of voluntary scheme or national system includes a high level check to assess whether the RED/FQD requirements are covered by their respective scheme or system. The results of these checks will be implemented in Nabisy. That means for example, that participants of voluntary schemes or national systems which do not cover all types of biomass, are restricted to just those that are covered. If the voluntary scheme or national system does not cover the calculation of GHG emissions by measured date, the participants are restricted to those types of biomass with existing standard values as laid down in Annex V of the RED.

All economic operators in the supply chain, from the first gathering point to the last interface, need to pass sustainability information to the next step in the supply chain or 'interface'. In the supply chain after the last interface it is mandatory to provide the relevant data about sustainability of each biofuel/bioliquid consignment by using the electronic German Sustainable Biomass System (Nabisy) administrated by the BLE. BLE can issue a Proof of sustainability" (Nachhaltigkeitsnachweis) if the

producer of the biofuel or bioliquid who has converted the product to the quality level of its final consumption (last interface):

1. Participates in a BLE-recognised voluntary certification scheme, an EU-recognised voluntary scheme or a national system of other MS;
2. Has a valid certificate issued by a BLE-recognised certification body or, in case of participants of VS/NS, is under control of an independent third party
3. Has received from the upstream interfaces:
 - a copy of their valid certificate;
 - confirmation that the requirements as to the land-related criteria have been fulfilled, and
 - the value of greenhouse gas emissions from cultivation, transport and processing;
4. Ensures traceability back to the cultivation of the biomass through a mass balance system;
5. The consignment complies with the greenhouse gas emissions savings potential required;
6. A proof of sustainability has been issued in accordance with the specifications laid down by a certification system recognised by the BLE, EU-recognised VS or national system of other MS;
7. Is the last interface in the supply chain, meaning there will be no further conversion.

While the producer is entering the relevant data of sustainability into Nabisy the data will be checked for plausibility. The recipient of the consignment will find the proof of sustainability immediately on his Nabisy account. Based on this proof of sustainability and according to the quantity of the delivery the supplier is able to transfer a partial proof of sustainability to the account of his client.

No differences exist in the sustainability requirements for domestic, EU and non-EU feedstocks or biofuel producers, since only voluntary schemes can be used to demonstrate compliance. However, requirements regarding the control audits of farms/plantations are different. At least 5% of the farms/plantations need to be controlled, while audit controls for at least 3% of the EU farms/plantations have to be carried out.

Germany does not provide additional guidance on mass balance and the calculation of actual GHG values beyond the guidance included in RED and FQD; economic operators have to follow the guidance provided by voluntary schemes.

2.11 Greece

By the time of finalising this report in November 2012, the implementation of the RED is not yet completed. While the RED has been implemented and the details of the implementation with regard to the sustainability scheme are detailed in a draft Joint Ministerial Decision (JMD), the latter still has to undergo final review and sign off by several Ministries. The official adoption is expected for the end of 2012. Therefore, on many of the questions we were not able to score the Greek implementation.

Economic operators in Greece are granted a transition period until the end of 2012 when the full requirements are expected to be in place. According to the draft JMD, EC-recognised voluntary

schemes, bilateral or multilateral agreements concluded by the EC, as well as national systems of other Member States are accepted (the latter will be assessed by the Bureau for their compliance with RED sustainability criteria and the Greek national reporting system). Additionally, the draft JMD foresees the option of economic operators supplying directly verified information to a newly installed Bureau (see below). The implementation of the RED and FQD sustainability criteria will be integrated in Greece. There will be no differences in requirements for domestic, EU and non-EU feedstocks or biofuel producers.

It is anticipated in the draft JMD that biofuel/bioliquid producers and wholesalers, as well as the economic operators who pay the fuel duty at the fuel duty point will report to the relevant authorities on an annual basis. It is anticipated that they will report to the 'Bureau for the Monitoring of Biofuels & Bioliquids Sustainability', registered in the General Secretariat of Energy & Climate Change. The Bureau is expected to be operational by early 2013. Until then, the relevant monitoring is carried out by the Ministries of Finance, Environment, Energy & Climate Change and Rural Development & Food. According to the draft JMD, all reporting items deemed necessary for effective implementation will be requested. A web portal including MS Excel templates is available to facilitate the reporting (www.fuelstats.gr).

It is anticipated that the accreditation of verifiers will be performed by ESYD (the Greek Accreditation Agency). No specific guidelines exist for the operation of the mass balance system. To facilitate GHG calculations, the draft JMD contains a reference to the BioGrace calculation tool.

2.12 Hungary

Hungary implemented the RED sustainability scheme at the end of 2010 as part of the Biofuel Act to support renewable energy in transport and a Government decree on the verification of sustainable biofuel production (as well as accompanying decrees and regulations specified below). There was no transition period with lighter requirements. The implementation of the RED and the FQD are integrated in Hungary. The Hungarian system can be classified as a national system based on land zoning. The national system focuses on ensuring the sustainability of domestically produced biomass. No differences exist in the requirements for domestic, EU and non-EU feedstocks or biofuel producers as such. However, as elaborated below, imported biomass or biofuels needs to be accompanied by alternative proofs of sustainability since the Hungarian system is tailored for domestic biomass only.

Under the Hungarian national system, biofuels are deemed to be in compliance with the land-related RED sustainability criteria if:

- 1) The biofuel feedstock originates from a 'default territory' or originates from a 'sensitive territory' when not in conflict with preserving biodiversity and the protection of 'highly valuable natural eco-systems'; and
- 2) The biofuel feedstock is produced in compliance with the CAP-rules (Regulation 73/2009/EC) or receives CAP payments.

'Default territory' is defined as 'arable lands for which in year 2008 or thereafter an application for single payment area scheme was submitted'. Essentially, default territory is land which was already agricultural land in 2008. 'Sensitive territory' is defined as areas qualified as sensitive in January 2008 or thereafter which cannot be used for biomass production. Essentially, sensitive areas include the areas mentioned in RED Articles 17(3)-17(5).

Economic operators can use EC recognised voluntary schemes or another Member States' national system to demonstrate compliance. The National Food Chain Safety Office (NFCSO) checks whether other Member States' national systems or voluntary schemes are in line with Hungarian requirements. Economic operators can also (for feedstocks produced in Hungary) demonstrate compliance by a 'biomass certificate', a 'sustainability verification statement' or a 'guarantee of sustainability'.

Biofuel feedstock producers can issue a 'biomass certificate' for each quantity of biomass produced or collected, which states that the biomass is produced in accordance with the sustainability criteria (options mentioned above). Information on the exact quantity/weight of the biomass must be included onto the certificate. Also, producers must attach unique serial numbers to each biomass certificate.

Biomass traders, biomass processors/biofuel producers and fuel suppliers who are registered in the Hungarian biofuel GHG registry can issue 'sustainability verification statements' for the biofuels sold if accompanied by a 'biofuel certificate'. Unique serial numbers must be attached to each sustainability verification statement.

The NFCSO can issue a 'guarantee of sustainability' upon request. The Guarantee will be issued if the applicant is registered in the Hungarian GHG registry, and the data in the biomass certificate, sustainability verification statement and GHG data are verified by an independent auditor. The 'biomass certificate' and 'sustainability verification statement' are therefore essentially self-declarations issued by economic operators. The 'guarantee of sustainability' is issued by the Hungarian authorities and is the only option that requires independent verification.

Economic operators who have to demonstrate compliance with the sustainability criteria and the mass balance system to the authorities are all parties in the biofuel supply chain. Under the Hungarian system, the NFCSO and the National Tax and Customs Authority carry out the control functions and economic operators have reporting obligations towards these two offices. The NFCSO controls the sustainability of the biomass, whereas the customs authority is responsible for recording the energy quantities of biofuels marketed. Fuel suppliers must submit a report on the volumes and energy content of petrol, diesel fuel and biofuel distributed during a given month to the National Tax and Customs Authority each month. This report also includes information from the sustainability verification statements. All parties in the biomass supply chain are required to provide information to demonstrate compliance with the RED sustainability criteria, reported to the NFCSO on a quarterly basis and recorded in the NFCSO-run GHG-registry. Records need to be kept by biomass traders, biomass processors and fuel dealers. Reporting of information to the NFCSO is done using a

standardised electronic data collection system (as of 2012). Verification of the sustainability information is done by the NFCSO; no guidelines for verifiers exist apart from the case where economic operators choose to use actual GHG values, whose calculation must be performed by (external) auditors, i.e. the Agricultural Mechanization Institute. No specific guidance on the operation of the mass balance system of the GHG calculation rules is available.

2.13 Ireland

Ireland implemented the EU sustainability criteria for biofuels in February 2012 through a Regulation, the European Union (Biofuels Sustainability Criteria) Regulations 2012. A brief transition period was introduced in the sense that biofuels contracted prior to February 2012 were exempted from the sustainability criteria until mid-July 2012.

The system for demonstrating compliance with the sustainability criteria can be classified as a national system based on ex-post verification of actual sustainability data, although as yet not all details of the system have been fully defined. In addition to ex-post verification, voluntary schemes recognised by the European Commission can be used to demonstrate compliance with the sustainability criteria. In addition, voluntary schemes accepted by other Member States can be used if independently verified to ISAE 3000. No differences exist in the requirements for domestic, EU and non-EU feedstocks or biofuel producers.

Economic operators who have to demonstrate compliance with the sustainability criteria and the mass balance system are fuel suppliers at the end of the supply chain. They have to report at least annually to the National Oil Reserves Agency (NORA), although they can choose to report more frequently (minimum of monthly). Mandatory reporting items include the quantity and type of biofuels supplied, feedstock type, country of origin, GHG performance, voluntary scheme used, degraded land bonus and soil carbon accumulation, as well as NUTS 2 region and land-use in January 2008 (on an annual basis). Reporting is done using a bespoke pro-forma application form.

Data reported (whether annually or monthly) needs to be accompanied by a limited assurance opinion, in accordance with ISAE 3000. Verifiers need to be independent and competent to undertake assurance engagements under ISAE 3000, but do not have to be accredited by the Irish National Accreditation Board or another national accreditation body.

NORA intends to align its procedure for reporting and demonstrating compliance with the sustainability criteria, including use of the mass balance system, with that of the UK. NORA is also advising that economic operators use the UK's Carbon Calculator tool for undertaking calculations on carbon emission savings.

2.14 Italy

The relevant Italian Government decrees implementing the RED sustainability requirements and setting out the national certification schemes were adopted in January and March 2012. Since January 2012, biofuels counting towards the target need to comply with the sustainability criteria. However, biofuels produced in 2011 or produced in 2012 with raw or intermediate material produced in 2011 and are placed on the market by the end of August 2012 only have to comply with lighter transitional requirements (i.e. economic operators have to demonstrate that they have processes implemented that prepare them to enter the national certification system and to demonstrate full RED compliance). The implementation of the RED and FQD sustainability criteria is integrated in Italy. The Italian system can be classified as a national system (voluntary scheme based), given the presence of a national certification system allowing for the verification of sustainability information provided to the Italian authorities by economic operators. No differences exist in the requirements for domestic, EU and non-EU feedstocks or biofuel producers.

During the transition period, only operators at the end of the supply chain have to demonstrate compliance with the sustainability criteria and the mass balance system. After this, all economic operators in biofuel supply chain need to provide different types of verified information, depending on the stage in the supply chain. Depending on the different competences, different information items are reported to the Agriculture, Environment and Industry Ministries. Verified information is required on an annual basis. It is set out clearly which information items are needed but there is no standardised template for reporting.

Guidance for GHG calculations is given and it is specified that the BioGrace calculation tool must be used to estimate conversion factors. No guidance is available yet for the operation of the mass balance system but it is stated that these will be published. The same holds for requirements for verifiers who check the information reported by economic operators, which are yet to be published.

2.15 Latvia

The Latvian Government Regulations regarding Sustainability Criteria for Biofuels and Bioliquids were adopted in July 2011. A transitional arrangement was in place during 2011, according to which there were no strict compliance requirements during 2011 for biofuels consumed in Latvia, but economic operators were required to carry out an independent (ex-post) audit by 1 April 2012 to demonstrate compliance with the sustainability criteria. The implementation of the RED and FQD sustainability criteria is integrated in Latvia. The Latvian system is a national system. In order to demonstrate the sustainability of imported biofuels or raw materials, economic operators may use voluntary schemes approved by the European Commission or national systems of other Member States to demonstrate compliance with the sustainability criteria (or bilateral or multilateral agreements). A Latvian national certification scheme is available operated by the Rural Support Service, the National Payment Agency in Latvia. It covers both domestic and imported biofuels but at the same time the Latvian Government communicates that the sustainability of imported raw materials or products needs to be

demonstrated through one of the three means mentioned above, i.e. either EC recognised voluntary schemes, national systems of other Member States or bi-/multilateral agreements. Compliance of domestic raw materials is recognised by the Rural Support Service. The Rural Support Service uses the Land Parcel Information System to check compliance with the land-related criteria. No differences exist in the requirements for domestic, EU and non-EU feedstocks or biofuel producers.

Economic operators who have to demonstrate compliance with the sustainability criteria and the mass balance system are fuel suppliers at the end of the supply chain, who have to report audited information once per year. The Rural Support Service is responsible for administering the system and collecting information on compliance with the sustainability criteria. Information to be reported includes the amount of biofuels and raw materials used, the data needed for the derivation of actual or default GHG values, the use of voluntary schemes as well as of bonuses. All of the information needs to be registered in the electronic application system (EAS). There is no standard format for reporting.

Verifiers who check the information reported by economic operators must be accredited by the Latvian National Accreditation Bureau and meet accreditation requirements, taking into account the standard EN 45011. There is no additional guidance on the operation of the mass balance system or the GHG accounting beyond the legislative texts.

2.16 Lithuania

The RED mandatory sustainability requirements are implemented in Lithuania through the Law on Renewable Energy Sources which entered into force on 23 May 2011. There was no transition period in Lithuania with "lighter" requirements for economic operators.

The system for demonstrating compliance with the sustainability criteria can be classified as a voluntary scheme based system since voluntary certification schemes are the principal way to demonstrate compliance and no Lithuanian national system has yet been developed. Lithuania accepts the use of all voluntary schemes recognised by the European Commission and other voluntary schemes are not accepted. It is unclear whether Lithuania accepts other Member States' national systems.

Economic operators who have to demonstrate compliance with the sustainability criteria and the mass balance system are the fuel suppliers who supply (bio)fuels past the duty point onto the market. Fuel suppliers have to report to the Lithuanian Department of Statistics as well as to the Ministry of Energy on an annual basis. Reporting currently focuses on the quantities of biofuels supplied and reporting of sustainability information is not required. The Lithuanian authorities assume all biofuels supplied to be sustainable because all Lithuanian biofuel (feedstock) producers are ISCC certified. It is unclear how this information is being kept up to date without a reporting obligation and how the Lithuanian authorities obtain information on the sustainability of imported biofuels that are being supplied onto the Lithuanian market.

Since only voluntary schemes can be used to demonstrate compliance, no differences exist in the requirements for domestic, EU and non-EU feedstocks or biofuel producers. Lithuania does not provide additional guidance on mass balance and the calculation of actual GHG values; economic operators have to follow the guidance provided by voluntary schemes.

2.17 Malta

Malta has implemented the RED and FQD sustainability criteria for biofuels through the Biofuels (Sustainability Criteria) Regulations, which entered into force on 24 December 2010. No transition period with "lighter" requirements for economic operators was introduced. The Maltese system for demonstrating compliance with the sustainability criteria can be classified as a national system, in which ex-post verification of sustainability data is permitted as a way to demonstrate compliance with the sustainability requirements. Malta also allows the use of other Member States' national systems provided they are in line with the EU-requirements. As Malta does not recognise voluntary schemes on a national basis the schemes used can only be schemes recognised by the European Commission.

Economic operators who have to demonstrate compliance with the sustainability criteria and the mass balance system are producers and/or importers of biofuels who supply biofuels to the market. These fuel suppliers have to report to the Malta Resources Authority on an annual basis. The information to be reported consist of the quantities of fuels which are supplied accompanied by a statement by an independent verifier that the biofuels supplied are in compliance with the sustainability criteria, either through a voluntary scheme or through another Member State's national system recognised by Malta. Verifiers need to be independent and competent to undertake assurance engagements under ISAE 3000 or an equivalent standard as proven to the satisfaction of the Malta Resources Authority.

No differences exist in the requirements for domestic, EU and non-EU feedstocks or biofuel producers. In cases of non-compliance administrative and criminal penalties may be imposed by the authorities. No additional guidance is provided for the functioning of the mass balance system, economic operators have to follow the guidance provided by voluntary schemes.

2.18 The Netherlands

The Netherlands has implemented the RED and FQD sustainability criteria in a single Government Decree and Ministerial Order which entered into force on the 1 January 2011 and which also contains the RED target for renewable energy in transport. The FQD target is implemented in a separate Decree and Order. The system for demonstrating compliance with the sustainability criteria can be classified as a system based on the use of EC recognised voluntary schemes. The Netherlands have recognised some voluntary schemes on a national basis, but this was mainly aimed to bridge the period up to mid-2011, during which the European Commission had not yet recognised any voluntary

schemes. Acceptance of voluntary schemes that are recognised in other Member States is possible following a quick scan to check whether the scheme complies with the RED.

Economic operators who have to demonstrate compliance with the sustainability criteria and the mass balance system are fuel suppliers at the end of the supply chain. They have to report on an annual basis to the Dutch Emissions Authority. Mandatory reporting items are quantity of biofuels supplied, quantity of biofuels in stock at beginning and end of compliance period, feedstock or GN-code of biofuel crop, biofuel types, whether or not biotickets (proof of administrative trading of biofuel sustainability) have been bought, country of origin of the feedstock, GHG performance, voluntary scheme used. The report has to be accompanied by a verifier opinion from an independent auditor to state that the voluntary scheme used has been recognised by the European Commission or by the Netherlands. Verifiers have to be accredited by the Dutch National Accreditation Council or another national accreditation body.

Since only voluntary schemes can be used to demonstrate compliance, no differences exist in the requirements for domestic, EU and non-EU feedstocks or biofuel producers. The Netherlands does not provide additional guidance on mass balance and the calculation of actual GHG values; economic operators have to follow the guidance provided by voluntary schemes.

2.19 Portugal

The implementation of the Portuguese system becomes effective in January 2013, until then sustainability requirements are not verified. The implementation of the RED and FQD sustainability criteria is integrated in Portugal. The system can be classified as a national system, given the option to provide ex-post verified information directly to the Member State. Portugal anticipates allowing the use of other Member States' national systems (if recognised by the EU) to demonstrate compliance with the sustainability criteria. Sustainability requirements for domestic, EU and non-EU feedstocks are the same apart from the fact that, for feedstock imported from third countries, actual GHG emission values shall be considered in the absence of an agreement (bilateral or multilateral) with the EU. Biofuels or bioliquids produced in domestic installations that started to operate after 1 January 2011 already are subject to a stricter GHG emission reduction target of 50%.

Portuguese biofuel producers and operators importing biofuels from abroad need to demonstrate compliance with the sustainability criteria. They report to the newly created National Authority for Monitoring the Sustainability Criteria of Biofuels and Bioliquids (ECS) (under the National Laboratory of Energy and Geology, LNEG). While economic operators need to report on a monthly basis, verified information is to be provided on a yearly basis. Information to be reported includes biofuel quantities and type, feedstock, country of origin and purchase of biofuels, which voluntary scheme was used, NUTS 2 region for EU feedstocks, land use in January 2008 if no voluntary scheme is used, and the GHG value. Reporting is done using a custom-made database.

Guidelines with specific requirements for verifiers who check the information reported by economic operators is under preparation. There is currently no specific guidance on the calculation of the GHG performance or on the operation of the mass balance system.

2.20 Romania

A Government Decision to promote the use of biofuels and bioliquids in transport was implemented in December 2011. An Order to implement the certification of sustainability criteria was subsequently implemented in February 2012. A simplified system was in place in 2011. The implementation of the RED and FQD sustainability criteria is integrated in Romania. The system can be classified as a national system, given the option for economic operators to provide ex-post verified information directly to the Romanian authorities. It is indicated that Romania accepts other Member States' national systems as a way of showing compliance with the sustainability criteria. No differences exist in the requirements for domestic, EU and non-EU feedstocks or biofuel producers.

Economic operators who have to demonstrate compliance with the sustainability criteria and the mass balance system are fuel suppliers at the end of the supply chain. They report to the Ministry of Economy, Trade and the Business Environment, on an annual basis. It has not become clear which information items need to be reported; the Romanian legislation as well as the Ministry's respondents to the questionnaire refer to the sustainability criteria and the European Commission Decision 2011/13/EU. There is no standardised format for reporting.

Romania has spelled out procedures concerning the recognition/approval process of verifiers who check the information reported by economic operators. They are subject to recognition by the Ministry of Economy, Trade and the Business Environment. The sustainability order contains additional information about GHG calculation rules and the mass balance system.

2.21 Slovakia

The Slovakian system was implemented in May 2011. Prior to this, there was a transitional period during which biofuels could contribute to mandates without sustainability information required. The implementation of the RED and FQD sustainability criteria is integrated in Slovakia. The system can be classified as a national system, with processes in place to facilitate Slovak producers to demonstrate compliance. The Slovak Government has recognised independent verification bodies and a 'soil portal' is in place, i.e. an inventory of arable land. The soil portal is a tool which is used to facilitate the search for the producers or for verifiers in order to check the information stated in forms; it shows whether a particular field is compliant with the land related sustainability criteria. Voluntary schemes recognised by other Member States as well as officially announced national systems of other Member States can be used to demonstrate compliance, both with the limitation that the economic operator must operate in the respective Member State. No differences exist in the requirements for domestic, EU and non-EU feedstocks or biofuel producers. All consignments of

biomass or, biofuels and bioliquids, whether domestic or imported, that are being sold on the Slovak market need to be accompanied by alternative proofs of compliance with the land related sustainability criteria.

Economic operators who have to demonstrate compliance with the sustainability criteria and the mass balance system to the authorities are the fuel suppliers who pay fuel duties. They have a verification obligation to demonstrate compliance with the sustainability criteria and the mass balance system and have to report to the authorities. Reporting is required every three months and economic operators who pay the fuel duty in Slovakia, i.e. fuel suppliers, report to the Slovak Custom Office and Slovak Hydrometeorology Institute. Information to be reported includes producer or supplier biomass declaration, GHG performance, amount of biofuel and energy content and information about whether wastes or residues were used. Reporting is done using a standard form.

Verifiers who check the information reported by economic operators are examined by the Slovak Ministry of Environment. Training for verifiers is available but not mandatory. With regard to specific guidance, the Slovak authorities refer economic operators to the BioGrace GHG calculation tool.

2.22 Spain

Spain has implemented the high-level RED criteria in the Royal Decree, which entered into force in November 2011. Secondary legislation is still under development and might be finalised by the end of 2012, although later is also possible. The government is likely to introduce a grace or transition period after the secondary legislation enters into force, during which not all requirements for economic operators apply.

The system for demonstrating compliance with the sustainability criteria still has to be designed. Spain is considering introducing a national system based on the ex-post verification of actual data (the Spanish Verification System). Economic operators can also use voluntary schemes recognised by the European Commission or other Member States' national systems provided they are considered to be in line with the RED-requirements. A procedure for recognizing other Member States' national systems is likely to be included in the upcoming secondary legislation.

Currently, economic operators who have to demonstrate compliance with the sustainability criteria and the mass balance system are all parties in the biofuel supply chain. They have to report on a monthly basis to the CNE (the National Energy Commission). After the upcoming secondary legislation has been introduced, it is likely that only fuel suppliers at the end of the supply chain will have to demonstrate compliance. The reporting frequency might also change in the secondary legislation.

Mandatory reporting items are to be defined in secondary legislation. Verification requirements and requirements for verifiers still have to be decided upon.

No differences exist in the requirements for domestic, EU and non-EU feedstocks or biofuel producers. Currently no penalty system is in place and fuel suppliers can use a buy-out option instead of meeting the biofuel mandate.

2.23 Sweden

Sweden implemented the RED mandatory sustainability requirements with three subsequent legislative documents that accompany the Energy Tax Act, the latter including incentives for the use of biofuels in the form of tax exemptions, conditional on the sustainability criteria being met. The criteria have been in force since 1 January 2011. The implementation of the FQD sustainability criteria is not integrated with the RED implementation but contained in separate legislation. The system for demonstrating compliance with the sustainability criteria can be classified as a voluntary scheme based system, however one that partly resembles a national-system like approach. The Swedish system is built around 'sustainability decisions' granted by the Swedish Energy Agency. In order to attain a sustainability decision, economic operators with a reporting obligation must submit information regarding their verification systems to the Swedish Energy Agency in order to be assessed for compliance with Swedish law. This information shall include, amongst other things, details regarding sampling methodology, deviation management, mass balance, and GHG calculation method, as well as a statement verifying compliance with Swedish law from an independent third party auditor. From this description, our understanding of the Swedish system is that it is one of national acceptance of (company) voluntary schemes, which is why it has been classified as a voluntary scheme based system. Voluntary schemes not (yet) recognised by the European Commission are subject to a case-by-case analysis. Recognition of other Member States' national systems is also being considered; these would eventually still be analysed by the Swedish Energy Agency on a case-by-case basis, and they would be subject to third party auditing. No differences exist in the requirements for domestic, EU and non-EU feedstocks or biofuel producers.

Economic operators who have to demonstrate compliance with the sustainability criteria and the mass balance system are fuel suppliers at the end of the supply chain. They have to apply to the Swedish Energy Agency for a sustainability decision. Mandatory reporting is once per year and includes the quantity and type of biofuels supplied, feedstock type, country of origin, GHG performance and the method of calculating it, voluntary scheme used, degraded land bonus and soil carbon accumulation. Reporting is done via an E-platform and a standardised MS Excel template.

Auditors put forward by economic operators are assessed by the Swedish Energy Agency to ensure their competence and independence. Guidance on the operation of the mass balance system and the calculation of GHG performance are given, the latter including a reference to the BioGrace calculation tool.

2.24 United Kingdom

The UK implemented the mandatory sustainability requirements of the RED on 15 December 2011, as an amendment to the RTFO (Renewable Transport Fuel Obligations Order) 2007, the UK biofuels legislation. The RTFO is also expected to be the mechanism used to meet the FQD, although the FQD is not yet implemented. The system for demonstrating compliance with the sustainability criteria can be classified as a national system, in which ex-post verification of sustainability data is permitted as a way to demonstrate compliance with the sustainability requirements. Voluntary schemes recognised by other Member States (but not recognised by the EC) are not automatically accepted. No differences exist in the requirements for domestic, EU and non-EU feedstocks or biofuel producers.

Economic operators who have to demonstrate compliance with the sustainability criteria and the mass balance system are fuel suppliers at the end of the supply chain. They have to report at least annually to the RTFO Unit of the Department for Transport; although they can choose to report more frequently (minimum period is monthly). Mandatory reporting items include the quantity and type of biofuels supplied, feedstock type, country of origin, GHG performance, NUTS-2 region for EU feedstocks, voluntary scheme used, land-use on 1 January 2008 (if no voluntary scheme used), degraded land bonus and soil carbon accumulation. Reporting on voluntary schemes, degraded land and soil accumulation factor is not mandatory in order to obtain Renewable Transport Fuel (RTF) certificates, which are required to meet suppliers' obligations under the RTFO, but must be reported and verified at least annually in the form of an annual report. Reporting is done using the RTFO Operating System (ROS), an online custom made database.

Data reported (whether annually or monthly) needs to be accompanied by a limited assurance opinion, in accordance with ISAE 3000. Verifiers need to be independent and competent to undertake assurance engagements under ISAE 3000, but do not have to be accredited by the UK Accreditation Service or another national accreditation body. RTF certificates are only issued where appropriate data has been reported and accompanied by a suitable assurance statement.

The UK provides additional guidance on mass balance and the calculation of actual GHG values. Furthermore, a free online carbon calculator tool is available for economic operators to use.

3 Effectiveness and administrative burden

This chapter describes the categorisation of the measures of effectiveness and administrative burden as major or minor. It further summarises the Member State scores for all major measures.

3.1 Categorisation into major and minor measures for effectiveness and administrative burden

Table 3 below summarises our categorisation of all measures of effectiveness and administrative burden as major or minor.

Table 3: Categorisation of measures as major or minor, AB or E

Major E	Minor E	Major AB	Minor AB
RED/FQD directives have been implemented by 5 December 2010 (Q2)	Introduction of transition period prior to full RED-implementation (Q3)	Transition period during which economic operators have less obligations compared to full RED-implementation (Q3)	Different requirements for EU and non-EU feedstocks (Q6)
Mandatory reporting on the following items: (1) quantities, (2), biofuel type, (3) feedstock, (4) GHG-performance, (5) country of origin of feedstocks, (6) VS used (if appropriate), (7) NUTS 2 region for EU feedstocks, (8) land use in January 2008 if no VS is used, (9) degraded land bonus (if used) and (10) soil carbon accumulation factor (if used) (Q12)	Different requirements for EU and non-EU feedstocks (Q6)	Reporting to more than one administrative body (Q9)	Different requirements for EU and non-EU producers (Q7)
Penalty system in place which deters non-compliance (Q14)	Different requirements for EU and non-EU producers (Q7)	Only economic operators who bring fuels past the duty point have to demonstrate compliance (Q10)	Mandatory reporting to MS authority more frequent than once a year (Q11)
Specific requirements for verifiers (in case of national system) (Q22)	Mandatory reporting to MS authority at least once a year (Q11)	Reporting to MS authority on more than the following minimum required items: (1) quantities, (2), biofuel type, (3) feedstock, (4) GHG-performance, (5) country of origin of feedstocks, (6) VS used (if appropriate), (7) NUTS 2 region for EU feedstocks, (8) land use in January 2008 if no VS is used, (9) degraded land bonus (if used) and (10) soil carbon accumulation factor (if used) (Q12)	Standardised reporting template provided (Q13)
Mass Balance is not operated at site level (Q20)	Standardised reporting template provided (Q13)	Mass balance period shorter/longer than 3 months (Q20)	MS accepting each others approved voluntary schemes or national systems (Q15, 16, 19)

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Major E	Minor E	Major AB	Minor AB
	Member State gives multiple ways to demonstrate compliance (in addition to EC-recognised schemes, bi-multilateral agreements and national recognition of a VS) (Q15,16,19)	sustainable energy for everyone Member State gives multiple ways to demonstrate compliance (in addition to EC-recognised schemes, bi-multilateral agreements and national recognition of a VS) (Q15, 16, 19)	GHG calculation rules provided, preferably consistent with BioGrace (in case of national system) (Q17)
	GHG calculation rules provided (in case of national system) (Q17)		Averaging above-threshold GHG performance between batches allowed (Q18)
	Guidance provided on how to operate the mass balance (in case of national system) (Q20)		Mass Balance is not operated at site level (Q20)
	Mass balance period shorter than one year (Q20)		

3.2 Summary of Member State scores against the major measures

Table 4 and Table 5 summarise the scoring of the Member States' national RED implementation against the measures categorised as major effectiveness and major administrative burden, respectively.

Notes on Tables 4 and 5:

- '*Unable to assess*' denotes that the implementation of the RED/FQD is not complete on this aspect;
- '*No information available*' denotes that no response has been received from the Member State; (applies to Austria¹³, Luxembourg, Poland, Slovenia);
- '*Not applicable*' denotes that the question is not relevant for the assessment given the Member State only allows the use of voluntary schemes (Belgium, Czech Republic, Estonia, Germany, Lithuania, Netherlands¹⁴).

¹³ Note that the scores for Austria on Effectiveness: Q2 and Administrative Burden: Q9, Q10 and Q15,16 & 19 are based on existing Ecofys/IEEP knowledge.

¹⁴ As indicated previously, the Swedish system can be classified as a voluntary scheme based system, however one that partly resembles a national-system like approach. Therefore the Swedish system has been assessed on the basis of a national-system for the purposes of the scoring in Tables 4 and 5.

Table 4: Summary of MS scores on the major measures of effectiveness

Member State	Implementation date (Q2)	Reporting items (Q12)	Penalty system (Q14)	Mass balance at site level (Q20)	Requirements verifiers (Q22)
Austria	E	No information available			
Belgium	E	E	E	Not applicable	Not applicable
Bulgaria	E	E	E	Unable to assess	Unable to assess
Cyprus	E	Unable to assess	Unable to assess	Unable to assess	Unable to assess
Czech Republic	E	E	E	Not applicable	Not applicable
Denmark	E	E	Unable to assess	E	E
Estonia	E	E	E	Not applicable	Not applicable
Finland	E	Unable to assess	Unable to assess	Unable to assess	E
France	E	E	E	E	E
Germany	E	E	E	Not applicable	Not applicable
Greece	E	Unable to assess	E	E	Unable to assess
Hungary	E	E	E	Unable to assess	E
Ireland	E	E	E	Unable to assess	E
Italy	E	E	E	E	Unable to assess
Latvia	E	E	E	Unable to assess	E
Lithuania	E	E	E	Not applicable	Not applicable
Luxembourg	No information available				
Malta	E	Unable to assess	E	Unable to assess	E
Netherlands	E	E	E	Not applicable	Not applicable
Poland	No information available				
Portugal	E	E	E	E	Unable to assess
Romania	E	Unable to assess	E	E	E
Slovakia	E	E	E	E	E
Slovenia	No information available				
Spain	E	E	E	Unable to assess	Unable to assess
Sweden	E	E	E	E	E
United Kingdom	E	E	E	E	E

Table 5: Summary of MS scores on the major measures of administrative burden

Member State	Transition period (Q3)	Reporting to more than one administrative body (Q9)	Reporting only by EO at the end of supply chain (Q10)	Reporting items (Q12)	Length mass balance period </> 3 months (Q20)	Ways to demonstrate compliance (Q15, 16, 19)
Austria	No info available	AB	AB	No information available		AB
Belgium	AB	AB	AB	AB	Not applicable	AB
Bulgaria	AB	Unable to assess	AB	AB	Unable to assess	AB
Cyprus	Unable to assess	AB	AB	Unable to assess	Unable to assess	AB
Czech Republic	AB	AB	AB	AB	Not applicable	AB
Denmark	AB	AB	AB	AB	AB	AB
Estonia	AB	AB	AB	AB	Not applicable	AB
Finland	Unable to assess	Unable to assess	AB	Unable to assess	Unable to assess	AB
France	AB	AB	AB ¹⁵ AB ¹⁶	AB	AB	AB
Germany	AB	AB	AB	AB	Not applicable	AB
Greece	AB	AB	Unable to assess	Unable to assess	AB	Unable to assess
Hungary	AB	AB	AB	AB	AB	AB
Ireland	AB	AB	AB	AB	Unable to assess	AB
Italy	AB	AB	AB	AB	AB	AB
Latvia	AB	AB	AB	AB	Unable to assess	AB
Lithuania	AB	AB	AB	AB	Not applicable	AB
Luxembourg	No information available					
Malta	AB	AB	AB	Unable to assess	Unable to assess	AB
Netherlands	AB	AB	AB	AB	Not applicable	AB
Poland	No information available					
Portugal	AB	AB	AB	AB	AB	AB
Romania	AB	AB	AB	Unable to assess	AB	AB
Slovakia	AB	AB	AB	AB	AB	AB

¹⁵ If using a voluntary scheme given only fuel refiners and distributors have to demonstrate compliance.

¹⁶ If using the French national system then data is collected at each stage.

Member State	Transition period (Q3)	Reporting to more than one administrative body (Q9)	Reporting only by EO at the end of supply chain (Q10)	Reporting items (Q12)	Length mass balance period </> 3 months (Q20)	Ways to demonstrate compliance (Q15, 16, 19)
Slovenia	No information available					
Spain	AB	AB	AB	AB	Unable to assess	AB
Sweden	AB	AB	AB	AB	AB	AB
United Kingdom	AB	AB	AB	AB	AB	AB

4 Conclusion and recommendations

This concluding section summarises the main findings derived from the Member State responses regarding the status of the implementation of the RED sustainability scheme, assessed according to effectiveness and administrative burden measures. Based on these findings, we put forward recommendations to the European Commission and Member State policy makers in order to increase effectiveness and reduce administrative burden.

4.1 Summary of the status of RED implementation

The results summarised in this chapter are based on the questionnaire responses received from 23 Member States. Austria, Luxembourg, Poland and Slovenia did not submit a response. Given the consortium's knowledge about the state of implementation in Austria, some analysis is provided for Austria. As mentioned previously, not all Member States have finalised the implementation of the RED sustainability scheme. Therefore, we have less than 24 scores for some questions.

As discussed in section 1.3, the different ways in which Member States implement the sustainability scheme can be classified into two broad approaches:

- (1) Member States that only allow the use of voluntary schemes (EC-recognised or Member State recognised) to demonstrate compliance with the RED requirements;
 - (A) Voluntary scheme based systems in which economic operators report information to the authorities and compliance is achieved *as biofuels pass the duty point*.
 - (B) Voluntary scheme based systems where economic operators report information into an electronic database, which is checked by Member State authorities *prior to passing of the duty point*.
- (2) Member States that allow the use of voluntary schemes and have developed a 'national system' for economic operators to demonstrate compliance with the RED requirements;
 - (A) National systems based on ex-post verification of actual data provided by economic operators.
 - (B) National systems that link compliance with the RED requirements to the CAP requirements, possibly combined with compliance with nature protection legislation, or introduced land zoning based on RED-compliant areas and non-RED compliant areas.

As shown in Table 2 in section 1.3, the systems in place in **eight** Member States cannot be classified, either because the responses are not available or because implementation is not sufficiently advanced at the time of writing¹⁷. Out of the remaining nineteen, **six** Member States fall into the first

¹⁷ Bulgaria, Cyprus, Finland, Greece, Luxembourg, Poland, Slovenia, Spain

category¹⁸ as requiring economic operators to use voluntary schemes. Out of those, only Germany has put in place a pre-duty point compliance process (1B). **Twelve** Member States fall into the second category and have a national system in place of one form or another. Of these, the national systems in **seven** Member States (Denmark, France, Ireland, Italy, Malta, Portugal, Romania and UK) fall into category 2A (ex-post verification) while in **four** Member States (Austria, Hungary, Latvia and Slovakia) the national system is linked to provisions of the CAP or based on a land zoning approach. The Swedish system for demonstrating compliance is an interesting case as it can be classified as a voluntary scheme based system, however one that partly resembles a national-system like approach.

As a reminder, the use of EC recognised voluntary schemes is an option to demonstrate compliance in all Member States, whether voluntary schemes based systems or national systems are in place.

As part of this analysis, we have scored Member States against a list of major measures of **effectiveness** (see summary Table 4). These are:

- The date of implementation of the RED/FQD sustainability scheme (Q2);
- The information items that economic operators have to report to the Member State competent authority (Q12);
- Whether a penalty system is in place to deter economic operators from non-compliance (Q14);
- Whether the mass balance is at a site level (Q20);
- Whether specific requirements for verifiers exist (Q22).

In the following we address these measures in turn by briefly summarising the findings.

Date of implementation

A major effectiveness measure is whether the RED sustainability criteria were implemented on time in the national laws of the Member States. Our analysis shows that only **three** Member States (Denmark, Estonia and Germany) completed implementation by 5 December 2010, the official implementation deadline stipulated in the RED. **Eight** Member States¹⁹ implemented the sustainability scheme between 5 December 2010 and 5 December 2011. A further **thirteen** Member States²⁰ implemented the requirements since 5 December 2011, or are still in the process of doing so. Of the three remaining Member States that have not submitted replies, Poland is still in the process of finalising the implementation and no information is available on the situation in Luxembourg and Slovenia.

Reporting items

Twelve Member States²¹ have reporting requirements for economic operators in place that provide for an effective sustainability system. In other words, these Member States require economic

¹⁸ Belgium, Czech Republic, Estonia, Germany, Lithuania, Netherlands

¹⁹ France, Hungary, Latvia, Lithuania, Malta, Netherlands, Slovakia, Sweden

²⁰ Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Finland, Greece, Ireland, Italy, Portugal, Romania, Spain, UK

²¹ Belgium, Denmark, France, Germany, Ireland, Italy, Latvia, Netherlands, Portugal, Spain, Sweden, UK

operators to report either more items than required under the RED, all items or all but one item required under the RED. In **six** Member States²² two or more items are not required (or one item if one of the following items: biofuel quantities or the GHG performance; see scoring rationale in Table 1). This lack of data to be reported by economic operators, which is important for a Member State to be able to establish whether biofuels marketed in that Member State are compliant with the sustainability criteria, reduces the effectiveness of the system in place. For the remaining Member States information is unavailable, either because of no response, incomplete response or ongoing implementation.

Penalty system

Thirteen Member States²³ have some form of penalty system in place for non-compliance with biofuels sustainability requirements. Some Member States mentioned the fact that biofuels not meeting the sustainability requirements will neither count towards the renewables (in transport and overall) target nor benefit from renewable energy support mechanisms, such as tax credits. This, however, follows directly from the implementation of Article 17(1) of the RED and does not represent a mechanism to deter economic operators from non-compliance or fraudulent behaviour such as non- or mal-reporting on biofuels marketed with the purpose of fulfilling a biofuel blending obligation or similar legal requirements. Altogether **seven** Member States²⁴ have no penalty system in place. For the remaining Member States information is unavailable because of either no response or ongoing implementation of the RED.

The existence of a penalty system is expected to increase the effectiveness of the sustainability system; contrarily the lack of such a system might 'invite' mal- or non-reporting by economic operators, or other fraudulent behaviour such as the marketing of unsustainable biofuels as being sustainable. At the same time, the impact a penalty system has on the effectiveness of the sustainability system in place depends on its design. We have not sought detailed information from Member States on the design of penalty systems and are therefore not in a position to analyse this aspect in more detail. However, what we do know from the responses is that most of the thirteen Member States with a penalty system have a fine system in place. The levels of the fines, where this information was provided, differ significantly. Examples include around €4,000 per operator for non-reporting in the Czech Republic, around €250 for non-provision of data in Hungary (seemingly per operator), €50,000 to €100,000 for economic operators in Italy for the infringement of reporting obligations and from €1,000 to €1,000,000 in Greece for non-RED compliance.

Level of operation of the mass balance system

The question is not applicable for scoring in **six** Member States as only voluntary schemes are allowed where the site level is already prescribed. Of the remaining 21 Member States, **five**²⁵ have applied the operation of the mass balance system at the site level in line with Communication 2010/C

²² Bulgaria, Czech Republic, Estonia, Hungary, Lithuania, Slovakia

²³ Czech Republic, Estonia, Germany, Greece, Hungary, Italy, Malta, Netherlands, Portugal, Romania, Slovakia, Sweden, UK

²⁴ Belgium, Bulgaria, France, Ireland, Latvia, Lithuania, Spain

²⁵ Denmark, France, Italy, Slovakia and UK

160/01. **Four**²⁶ Member States operate (or also allow operating) the system at the company or tax warehouse level. Information is not available for **four** Member States because of no response and not available in **eight** Member States due to incomplete transposition of the sustainability scheme.

The operation at site level is deemed necessary for the effectiveness of the mass balance system to trace sustainable materials through the supply chain. Operating the system at the company or tax warehouse level reduces traceability and therefore puts into question the effectiveness of the whole system.

Requirements for verifiers

Ten Member States²⁷ require verifiers to meet certain standards or criteria. **One** Member State (Hungary) does not have such requirements and the remaining Member States could either not be assessed or, as in **six** cases²⁸ only allow the use of voluntary schemes to demonstrate compliance with the RED requirements, which automatically include requirements for verifiers (we have not scored the question for these Member States). Member States refer for example to ISO or CEN standards, to ISAE 3000 standard for verification as well as to national accreditation processes. Having in place requirements for verifiers is deemed a key element for the effectiveness of the sustainability system, given the important role of verifiers in assessing the accuracy and appropriateness of the sustainability data provided by economic operators, as well as whether sustainability information remains attached to raw material and biofuel consignments along the supply chain, following the mass balance approach.

Based on this analysis of the major effectiveness measures, it is clear that an important precondition for ensuring the effectiveness of the sustainability systems in Member States has not been met (i.e. the timely implementation of the RED sustainability requirements into national law). Leaving the implementation date aside and focusing on the remaining major effectiveness measures related to the practical functioning of the system (reporting items required, existence of a penalty system, operation of the mass balance system at site level and existence of requirements for verifiers), we conclude the following:

For each of the remaining four aspects, between **five** and **thirteen** Member States are found to have provisions in place that increase the effectiveness of their respective national sustainability systems. While this represents for each measure a majority of the Member States assessed (i.e. all Member States apart from those for which no information was available due to no response or incomplete implementation, or where the aspect was 'not applicable' for that Member State), it does not represent the majority of all twenty seven Member States. There is therefore scope and the need to improve the effective implementation of the RED requirements in EU Member States. In particular, section 4.2 puts forward our recommendations with regard to the inclusion of required reporting items, the introduction of effective penalty systems and of requirements for verifiers. Table 4 gives

²⁶ Greece, Portugal, Romania, Sweden

²⁷ Denmark, Finland, France, Ireland, Latvia, Malta, Romania, Slovakia, Sweden, UK

²⁸ Belgium, Czech Republic, Estonia, Germany, Lithuania, Netherlands

an overview about which Member States have more effective systems in place than others, *based on their scoring against the major effectiveness measures. Excluding the score on the date of implementation*, these are Germany, the Netherlands, Sweden and the UK, who each score well on the reporting items, penalty system and requirements for verifiers (the latter not being applicable in the case of Germany and the Netherlands, given only voluntary schemes may be used there).

We have furthermore scored Member States against a list of major **administrative burden** measures (see summary Table 5). These are:

- Whether a transition period with lighter requirements was or is in place (Q3);
- Whether reporting is to one or more administrative bodies (Q9);
- Which economic operators have to report, i.e. all or only those at the end of the supply chain (Q10);
- The information items that economic operators have to report to the Member State competent authority (Q12);
- The length of the mass balance period (Q20);
- Whether economic operators have different ways to demonstrate compliance (Q15, 16, 19).

In the following section we address these measures in turn by briefly summarising the findings.

Transition period

Out of the **twenty one** Member States for which information on the existence of either a past or still ongoing transition period was available, **twelve** Member States²⁹ introduced a transition period during which economic operators benefitted from lighter requirements to demonstrate compliance with the sustainability requirements. While this is expected to reduce administrative burden, it also reduces effectiveness. It is worth noting in this context that all but one (Estonia) of the twelve Member States introducing a transition period did so while at the same time being late in implementing the RED (i.e. implementation either between 5 December 2010 and 5 December 2011 or after 5 December 2011). The remaining **nine** Member States³⁰ have not put a transition period in place (or at least not one that entailed lighter requirements for economic operators).

Reporting to one or more administrative bodies

In the significant majority of Member States for which this information is available (**eighteen**, see Table 5 for the complete list), economic operators only have to address one authority in order to report information to demonstrate their compliance with the sustainability criteria. Reporting to more than one body, which is expected to increase the administrative burden, is required in **five** Member States (France, Hungary, Italy, Lithuania and Slovakia). For the remaining Member States this information is not available.

²⁹ Belgium, Estonia, France, Greece, Ireland, Italy, Latvia, Netherlands, Portugal, Romania, Slovakia, Spain

³⁰ Bulgaria, Czech Republic, Denmark, Germany, Hungary, Lithuania, Malta, Sweden, UK

Economic operators with reporting obligations

Similarly, in the significant majority of Member States for which this information is available (**eighteen**, see Table 5 for the complete list), it is the fuel suppliers at the end of the biofuel supply chain that have to demonstrate compliance with the sustainability criteria and report this information to the competent administrative bodies. In **four** Member States (Bulgaria, Hungary, Italy and Portugal) additional actors along the supply chain have to report, which increases the administrative burden for the biofuel industry as a whole. These may include raw material producers and traders as well as biofuel producers. France constitutes a special case as the assessment differs depending on whether operators within France use a voluntary scheme or the French national system. For the remaining Member States this information is not available.

Reporting items

As has been summarised above already, Member States mainly require economic operators to report information items in line with the RED and further guidance by the European Commission. **Fourteen** Member States (see Table 5 for the complete list) therefore obtain a neutral administrative burden score; **four** Member States (Belgium, Hungary, Italy and Spain) require more information from economic operators hence increasing their administrative burden, but at the same time potentially increasing the effectiveness of the system.

Length of the mass balance period

All Member States that were scored on this question (**ten**, see Table 5 for the complete list) have in place a mass balance period of between three and twelve months, which is judged to have no major influence on the administrative burden of economic operators.

Multiple ways of demonstrating compliance

A significant majority, i.e. **twenty one** Member States (see Table 5 for the complete list) reduce the burden for economic operators by giving multiple ways of demonstrating compliance with the sustainability criteria, i.e. beyond the use of European Commission recognised voluntary schemes and bi- and multilateral agreements (once concluded). This includes most commonly having in place national systems or accepting the use of other Member States' national systems as well as accepting voluntary schemes recognised in other Member States. Bulgaria and Sweden do not provide further ways of showing compliance that go beyond the use of European Commission and nationally recognised voluntary schemes.

Based on this analysis of the major administrative burden measures, we conclude that in the large majority of Member States assessed, the systems in place do not increase the administrative burden for economic operators above an assumed baseline of RED compliance. We note in particular the acceptance of alternative ways of demonstrating compliance in most Member States. Several Member States have or had transition periods in place; while expected to reduce the administrative burden for the industry, this practice however comes at the expense of reducing the effectiveness of the system while the transition period is in place and is therefore not recommended. Some reduction of administrative burden can be achieved with regard to the ways in which Member States require economic operators to report sustainability information (i.e. both which actors have to report and to

how many administrative bodies they have to report). A number of Member States do not receive any 'increased administrative burden' (i.e. **AB**) scores as part of the assessment against the major measures, while being assessed against all of the major measures. These are: the Czech Republic, Denmark, Estonia, Germany, the Netherlands, Slovakia, Sweden and UK. It is worth noting that this list includes the four countries that scored well on the major effectiveness measures (excluding the date of implementation) above (i.e. Germany, the Netherlands, Sweden and the UK). This demonstrates that an effective system and moderate administrative burden for economic operators are *not* mutually exclusive, based on our analysis.

4.2 Recommendations

Based on the analysis of the national implementation of the RED sustainability scheme in Member States, we provide recommendations targeted at both increasing effectiveness and reducing administrative burden, where the latter does not compromise effective implementation. These recommendations are primarily addressed at Member State policy makers responsible for implementing the RED sustainability scheme. Likewise, they may help inform any guidelines that the European Commission might decide to issue to Member States.

Our analysis above focusing on what we deem to be major aspects of effectiveness has identified that there is room for improving the effectiveness of the sustainability systems in place in most Member States, so as to ensure only biofuels in compliance with the RED sustainability criteria are marketed in the EU and counted towards the renewable energy target. We therefore recommend the following:

- The timely implementation of the sustainability criteria in national law is the first step towards ensuring effectiveness with regard to the RED's mandatory sustainability criteria for biofuels. As mentioned in the previous section, implementation still remains incomplete for some Member States. We therefore recommend that those Member States who have currently not, or not yet fully implemented the sustainability scheme, do so and the European Commission monitors this process and takes appropriate action, for example in the form of infringement procedures in cases of persistent non implementation.
- Given the fact that it is now well past the official RED implementation deadline of 5 December 2010, we furthermore recommend that Member States no longer grant transition periods with lighter sustainability requirements for economic operators. Given the late state of implementation and the availability of first lessons learnt from other Member States it is no longer appropriate to justify a transition period to reduce the administrative burden for industry, given that any further delay will increase the chance of non-compliant biofuels being marketed and counted towards the RED renewable transport target.
- With regard to the reporting requirements, it was sometimes difficult to retrieve information on the precise nature of the reporting requirements for economic operators from Member States. This may have been due to misunderstanding of the related question in the study's questionnaire or because some Member States may not have clearly detailed these requirements. The EC

Decision (2011/13/EU) contains some guidelines on important information items. Given that **six** Member States require less reporting items from economic operators than is deemed necessary for effective implementation of the RED sustainability scheme, we highlight the importance of Member States putting in place clearly in their national legislation which information they require from economic operators, so that those economic operators can set up processes to make sure this information is retrieved from the biofuel supply chain. We further recommend that the following information items detailed in Table 6 should be required as a minimum (two further items are listed as being optional).

Table 6 Recommended reporting items

Reporting item	Why should this item be a reporting requirement?
Quantity	Fundamental to knowing how much biofuel is brought to market.
Biofuel type	Requirement under FQD.
Feedstock	Key characteristic of biofuel (e.g. GHG performance, whether it is double counted).
GHG-performance	Important to understand impact of policy and whether biofuel meets min. GHG savings threshold. Requirement under FQD.
Country of feedstock origin	Requirement under FQD. Furthermore the key sustainability risks are at the feedstock production.
Country of biofuel purchase	Requirement under FQD.
Name of voluntary scheme (if used)	Requirement under EC Decision (2011/13/EU).
Degraded land bonus (if used)	Requirement under EC Decision (2011/13/EU).
Soil carbon accumulation factor (if used)	Requirement under EC Decision (2011/13/EU).
NUTS 2 region	Requirement if using GHG defaults in the EU (not necessary if using actual values, or if GHG certified under an EC recognised voluntary scheme).
Land use in January 2008 (if no VS is used)	Requirement to comply with Articles 17(3)-(5) if not certified under an EC recognised voluntary scheme.
Optional items	
Biofuel production process	Currently only relevant for palm and wheat if default GHG values are used, and if the GHG is not certified to a voluntary scheme.
Date installation in operation	Exact date not necessary, but relevant for MS to know which GHG threshold the biofuel needs to comply with.

- We recommend the use of a standardised reporting template for economic operators, specifying units and standard terminology to ensure consistency.
- Some Member States have developed electronic databases (e.g. Nabisy in Germany) into which economic operators report their sustainability information. In order to increase consistency between Member States it would be advisable to create coherence between those databases and ideally allow them to interact between each other.

- With regard to penalty systems, we note that **seven** Member States do not have any penalty system in place. Having a penalty system such as a fine system in place is recommended to deter economic operators from non- or mal-reporting or other fraudulent behaviour. At the same time, the real impact on effectiveness depends on the design of such a system and some of the fines currently envisioned in Member States seem very low and therefore unlikely to represent a real deterrent for not adhering to the sustainability criteria, especially for the major fuel companies. We therefore recommend taking the financial and economic realities in the biofuel market into account when determining adequate levels of fines. A fair approach would be to link the fine level to the financial turnover generated by the economic operator, in order to appropriately determine effective levels of fines for small and large producers alike. Another effective approach could be the exclusion of economic operators from the national database of sustainable biofuel (producers), as is for example done in Hungary, where the excluded operator cannot be taken up again in the national 'GHG-registry' until one year after the cancellation.
- Out of the **eleven** Member States assessed against the existence of requirements for verifiers, only **one** does not have requirements in place. However, a range of Member States have not yet decided whether or not to introduce requirements, highlighting the importance of our recommendation to have requirements for verifiers in place, e.g. prescribing verifiers to be independent and qualified. This could be achieved either through accreditation or through the use of the ISAE 3000 standard. This is deemed necessary in order to safeguard the quality of independent audits of economic operators and the sustainability information that they supply, as is required for voluntary schemes. It should be mentioned that while this is a powerful way of increasing effectiveness, it does not come at the expense of increasing the administrative burden for economic operators, i.e. biomass and biofuel producers and any intermediate traders; if at all it would increase the burden for verification bodies.

As has been analysed above, the Member States assessed scored well on the **administrative burden** measures. Our recommendations are most relevant with regard to the reporting process, where we have identified some scope for reducing administrative burden for economic operators when demonstrating compliance with the sustainability criteria, while at the same time not resulting in a less effective system.

- In a few Member States, economic operators are required to report to several administrative bodies. We recommend that Member States designate a single competent body, whether as part of an existing authority or a newly created one, to which economic operators report. This is a way of reducing administrative burden that does not bear the risk of reducing the effectiveness of RED implementation; rather the contrary might be the case: having several administrative bodies could possibly make it more difficult to quickly detect non-compliance and hence ensure the effectiveness of the system.
- It is appropriate that (bio)fuel suppliers at the end of the supply chain are the parties that are required to report verified sustainability information to the competent administrative body instead of reporting at multiple stages along the chain, as is required in a couple of Member States. Given

the effective operation of the mass balance system and the passing on of sustainability information along the biofuel supply chain, this is a way to reduce administrative burden for the supply chain as a whole while not compromising on the effectiveness of the system.

- Most Member States reduce administrative burden offering economic operators multiple ways of showing compliance with the sustainability criteria including the land use, GHG emission savings and the mass balance chain of custody criteria. This point is therefore to be understood more as a positive assessment rather than a recommendation. As has been mentioned earlier, we understand 'multiple' to go beyond the options of using European Commission recognised voluntary schemes, bi- and multilateral agreements with third countries concluded by the European Commission. We highlight the possibility of having a national system of ex-post verification in place, through which economic operators provide information about the sustainability characteristics of the biofuel verified by independent auditors directly to the competent Member State authorities; as well as the recognition of other Member States voluntary schemes or national systems. The latter offers the potential to increase harmonisation of national systems and RED implementation across the EU. This should be the case especially where several Member States initiate the mutual recognition of their national systems by agreeing on common standards and approaches.
- Recognising other Member States' voluntary schemes or national systems does come with a caveat with regard to the effectiveness of RED implementation: we recommend that recognition should only take place after a check that other Member States' schemes or systems are in line with national (and indeed European Commission) requirements.
- Concerning the length of mass balance period and level of operation we recommend a mass balance period of three [to six] months in order to reduce the chance that non-compliance is only identified at the end of the reporting year and avoid excessive administrative burden from closing the balance over a period shorter than three months. It is crucial that the system is operated at a site level in order to be effective in tracing the sustainability information together with the materials going through the supply chain.

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