

Biofuel producers are encouraged to achieve sustainability certifications to prove that their products are environmentally friendly

Chasing certifications

Setting legal sustainability requirements for biofuels and bioliquids has been a pioneering undertaking by European Parliament and Council. The Renewable Energy Directive (RED) and Fuel Quality Directive (FQD) have triggered the transformation of the entire market. This has been achieved in a very short period of time. It is a unique success story, in particular if compared with the still slow and fragmented developments towards sustainable and deforestation-free supply chains in food, feed and chemical markets. Sustainability certification for biofuels and bioliquids can be used as a blueprint for those markets.

The RED/FQD sustainability requirements are being implemented by voluntary schemes recognised by the European Commission (EC). International Sustainability and Carbon Certification (ISCC) was recognised by the EC as one of the first schemes in 2011. In 2016, the EC adopted the decision to re-recognise the ISCC for another five years.

Since ISCC's start of

operation, more than 13,500 certificates in more than 100 countries have been issued. The share of certificates related to waste and residues is more than 40%. The demand for advanced and indirect land use change (ILUC)-free biofuels will increase in the future. ISCC already certifies such fuels, e.g. wood-based, municipal solid waste (MSW)-based, and crop residue-based biofuels and non-bio renewable fuels. ISCC is also working on certification options for low ILUC-risk agricultural feedstocks (e.g. double cropping, alternative land use systems). Furthermore, ISCC has become a leading certification system for the growing market of biomethane. ISCC is also active in the market for biojet fuel and in overseas markets that are currently starting to implement sustainability requirements comparable to those in the EU.

Significant improvements and investments have been incentivised by the mandatory sustainability requirements for biofuels and bioliquids (e.g. GHG emission savings, avoidance of land use change) and are being verified through

voluntary scheme certification. One core asset of a voluntary scheme is its credibility. In essence, voluntary schemes have to ensure the integrity of the entire programme and have to invest in a continuous improvement and development of new tools to ensure reliable results in cost-efficient processes. In the following, some examples of ISCC's approach and innovative solutions to achieve tangible impact and credibility are presented.

Certification features

ISCC applies a high sustainability standard and strict rules of implementation and verification. ISCC-certified supply chains are deforestation-free and sustainable, and compensation for new plantings is not allowed. The protection of valuable habitats and biodiversity is strengthened through the programme. Development on high carbon stock areas, such as peatlands and wetlands, is not allowed. ISCC has developed and implemented a comprehensive guidance package to assess

grassland and to differentiate biodiverse grassland from non-biodiverse grassland.

ISCC provides a comprehensive GHG calculation method, guidance, emission factors, and also focused GHG trainings for companies and auditors to ensure consistent application in the scheme. ISCC supports the implementation of GHG reduction technologies and methodologies, e.g. in the palm oil sector. Currently, GHG methane emissions of POME ponds are measured by ISCC to assess the impact on methane emission reductions from different technologies and to provide GHG values for new technologies being used by palm oil producers. Other projects deal with the impact of changes of agricultural production systems on soil carbon stocks.

ISCC also works on social, environmental and economic improvement. In regional stakeholder meetings, on-going projects and innovative solutions are being presented to system users, auditors, and other interested parties. Lately, social issues are gaining importance in the public debate, e.g. child labour, migrant workers, labour rights and – in some regions – food security. Assessments of compliance are in practical terms often difficult, which is why ISCC works on providing additional guidance and relevant information to auditors.

Monitoring LUC

The ISCC Integrity Program is an essential part of ISCC's quality and risk management. The objective is to monitor compliance of certification bodies and certified companies with the ISCC requirements. Three independent ISCC



Figure 1- Biodiversity information provided by GRAS. Brazil is used as an example in the picture.

auditors conduct integrity audits. In 2016, ISCC conducted 64 integrity assessments in Europe, Asia and Latin America. Deficits have been detected especially in the areas of traceability, mass balance and GHG calculation as well as land use change.

Deficits and non-conformities detected can result in a withdrawal of certificates (e.g. nine certificates have been withdrawn in 2016), suspensions from certifications (five companies) or issuance of warnings (six companies in 2016) and “yellow” (two companies in 2016) and “red” carts (none in 2016) for certification bodies. These results help to further improve the system as it provides valuable feedback for system users, auditors and ISCC.

ISCC is using innovative technologies to increase effectiveness and to reduce costs for system users. Remote sensing-based technologies help auditors conduct risk assessments and verify land use change (LUC). Global Risk Assessments Services (GRAS) is a new tool providing comprehensive sustainability-related geo-referenced information on biodiversity, LUC, carbon stock and social indices.

GRAS provides a compilation of different layers from national and international databases on biodiversity. The information is immediately available and presented in a very user-friendly way. In figure 1, Brazil is shown as an example. The

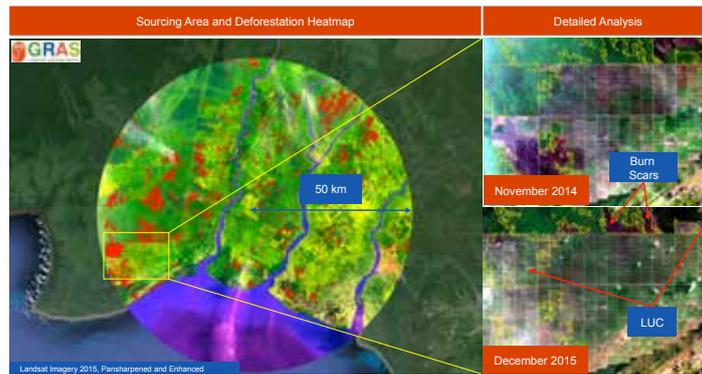


Figure 2 – Detecting LUC with GRAS, establishment of a palm plantation in 2010

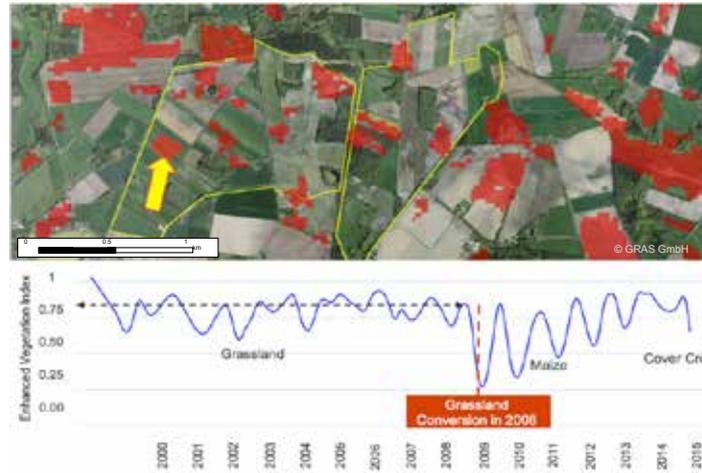


Figure 3 – Conversion of grassland in Europe in 2008

maps differentiate clearly between no-go and risk areas. This helps conduct the risk assessments, and saves time and costs in audits. GRAS also provides carbon maps and important information regarding social issues on a country (and partly regional) level.

A key functionality is the detection of LUC. Auditors and companies use GRAS to verify the occurrence of LUC by using a simple-to-interpret yet powerful greenness index called

Enhanced Vegetation Index (EVI). Using EVI time series from the year 2000 until today, GRAS users can differentiate among the types of green cover, see the history of the land use, and – most importantly – detect the exact point in time of LUC. It enables the user to identify deforestation, replanting activities, grassland conversion and cropping activities (see examples in figures 2 and 3). Combining ISCC with GRAS helps with the conduct of

audits and increases the credibility of sustainability certification at the same time.

Automated systems

In order to further improve the audit and certification process, ISCC has developed an electronic tool called Audit Procedure System (APS) to increase the efficiency of the audit process and decrease the costs of certification. The tool assists auditors in conducting audits and makes the documentation process easier. ISCC’s checklists and audit procedures are continuously adapted and further developed to guarantee best practicality, such as the Excel-based farm procedure, which automatically hides criteria that are not applicable, or an Excel tool helping to identify chemicals prohibited under ISCC. APS also generates automatic summary audit reports which can be published on the ISCC website. This contributes to increased transparency.

ISCC works continuously on improving the integrity and credibility of certification. Frequent multi-stakeholder dialogues on sustainability and its practical implementation and verification help to improve, increase and implement sustainability requirements.

Though sustainability certification is a substantial step into the right direction, sustainability and deforestation challenges cannot be tackled by certification alone. As the major growth area lies within smallholders who are difficult to certify, it is necessary to go beyond certification. Implementing the ISCC Landscape Approach can mitigate sustainability and deforestation risks caused by smallholders through certified units acting as role models and supporting rural development in the region. ●

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Figure 4 – Reliable verification and traceability with ISCC and GRAS