Biodiversity Implications of a Sustainability Standard for Sugarcane

Report of the IUCN-convened expert group assessing biodiversity implications of Raízen's implementation of the Bonsucro Standard in Brazil

INTERNATIONAL UNION FOR CONSERVATION OF NATURE

Table of Contents

Executive Summary

As part of its sustainability initiatives, Raízen – a joint venture company between Shell and Cosan, and Brazil's largest producer of sugarcane-based ethanol – has committed to implement the

Background

Formed in 2011 as a joint venture (JV) between Shell and Cosan, Raízen is Brazil's largest producer of sugarcane-based ethanol, sold for domestic consumption as well as export. The company also produces sugar and electricity. As part of its sustainability initiatives, Raízen has committed to adopting the Bonsucro standard for all of its sugarcane processing mills and their raw material suppliers. This commitment was made in 2011 as part of the JV agreement with Shell.

IUCN has a collaborative partnership with Shell on biofuels sustainability, and contributed to sustainability analysis for this JV. Raízen is now progressing with implementation of the Bonsucro standard and has achieved certification for seven mills so far. Drawing on this initial experience, IUCN, Shell and Raízen are interested to assess the biodiversity-related implications and management changes that have resulted from certification to date, and to identify options for improving biodiversity-related outcomes more broadly, as the Bonsucro standard is applied across the company's entire operations.

Bonsucro was launched in 2009 to help improve the social and environmental sustainability of sugarcane production and processing. Through a two-year global consultation process including farmers, industry, and civil society stakeholders, the initiative resulted in the release, in 2011, of the Bonsucro sustainability standard. This standard aims "to improve the social, environmental, and economic sustainability of sugarcane by promoting the use of a global metric standard, with the aim of continuously improving sugarcane production and downstream processing in order to contribute to a more sustainable future"[1]. The standard includes five core principles - related to: 1) legal compliance, 2) human rights, 3) production and processing, 4) biodiversity and ecosystem impacts, and 5) continuous improvement - and accompanying criteria with which sugarcane production and processing systems must comply to receive Bonsucro certification. Compliance is verified through annual third-party audits based on a formal process and against a set of indicators embedded in the standard.

Project Objectives

To evaluate the biodiversity implications of Raízen's implementation of the Bonsucro standard, IUCN in October 2012 convened a group of experts in sustainability standards, biodiversity indicators, conservation planning, and related fields. This assessment focused on the company's Maracaí mill, the first mill ever to become Bonsucro-certified. The project had four main objectives:

1. To compile biodiversity-related information from Raízen's implementation of the Bonsucro standard at the Maracaí mill and a portion of its sugarcane supply areas;
2. To interpret this information to identify management changes that did, or may have, resulted in impacts to biodiversity and environmental quality (i.e. water, soil and air), compared to pre-certified conditions where possible;
3. To suggest approaches that can assist Raízen with effective implementation of biodiversity-related principles and criteria of the Bonsucro standard; and
4. To suggest a biodiversity monitoring framework for assessing conservation outcomes of the Bonsucro standard for Raízen in the long term.

Report Objectives

This report marks the end of the project and is a synthesis of the expert group's key findings and recommendations. While the group's primary charge was to assess Raízen's implementation of the Bonsucro standard, the timing of the group's work coincided with a public consultation period (January 15 – February 28, 2013) created by Bonsucro to invite feedback on the standard and suggestions for improvement. Thus, IUCN, on behalf of the expert group, also submitted (as a secondary and separate output) comments and recommendations as part of this public consultation process. t

biodiversity implications of Bonsucro certification in this context and to identify opportunities for effectively managing biodiversity impacts at other mill sites, particularly as the company expands the implementation of the standard across all its operations and supply chains.

Main Biodiversity and Environmental Quality Observations in the Maracaí Mill and Supply Areas

Raízen's implementation of the Bonsucro standard has been associated with several important and positive changes at the field, mill, and company management levels. Some of these changes appear

systems that can ensure that all operations are in full compliance with the law at all times, as required to achieve and maintain Bonsucro certification (Principle 1). For instance, as a consequence of the implementation of the Bonsucro standard, actions were taken to improve water usage rates to receive water licenses at the Maracaí Mill. However, the group identified one instance of vinasse (cane residue following ethanol distillation) leakage into nearby water bodies at the Maracaí

Key Recommendatio

biological control, setting action thresholds to start chemical control and, when using chemical

3. Maintain and improve conservation value at the landscape-level

As noted earlier, Brazil's Forest Code requires the conservation and/or restoration of natural habitats on farm properties as per federal legislative requirements. Bonsucro certification provides an additional compliance mechanism beyond the Brazilian regulatory process. As Raízen seeks certification for its remaining mills over the next several years, it will therefore need to comply with this law, including through the establishment and implementation of land conservation and restoration plans on portions of the approximately one million hectares from which the company expects to source sugarcane by the latter part of this decade. Cumulatively, these actions may result in significant habitat protection and restoration. However, the overall value of this habitat for biodiversity protection and the provision of ecosystem services will depend strongly on the type, configuration, and quality of habitat conserved oc61t -2.896 -1.27-3(t)(f)-1(6 ( )Tj-0.0

e. Additional lands designated for restoration should, where possible, be configured to provide several large patches of habitat that are interconnected by riparian zones or other linear areas of natural or semi-natural habitat. Patch size should be calculated and planned to provide a substantial amount of natural habitat exclusive of edge effects (the boundary zone of a natural habitat patch that is typically degraded due to being adjacent to modified land uses such as agriculture).
f. Land managers should consult local ecological experts when developing restoration plans. Local ecological stations and/or local universities and research institutes are good places to seek such expertise from (as confirmed at the Assis Ecological Station during the field trip). Frequently, it is appropriate and much more cost-effective to enable restoration to proceed mainly through natural colonization, with some management assistance. For example, in the area surrounding the Maracaí Mill, abandoned pastures undergo much faster secondary succession than abandoned agricultural fields due to richer seed bank, re-sprouting of underground plant vegetative parts, and greater permeability of the landscape to animal seed and fruit dispersers. Therefore when habitat restoration away from stream edges is necessary, selecting pastoral sites rather than agricultural fields may be more economically and ecologically viable. However, on some sites, importation and planting of particular species will

quest of conservationists and sustainably managed businesses to make agricultural landscapes more “multi-functional” by providing high levels of commodity production as well as significant conservation value for native species and ecosystem services. The inclusion of agricultural landscapes composed of sugarcane fields and natural, semi-natural and restored habitats, within

Annex 2: Provided List of Information

Annex 3: Agenda of Field Day Visit

INTERNATIONAL UNION
FOR CONSERVATION OF NATURE

WORLD HEADQUARTERS
Rue Mauverney 28
1196 Gland, Switzerland
mail@iucn.org
TeTD[(-1.158 TD[(1196 G)4(l)-4O)-4(R CO)-4(NS)-2(E)-2(RV)-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-12m[0 0 7.98 72 1-4Ol@iucn.org