HCV management and monitoring
A review of field-level barriers to effective HCV management and monitoring in RSPO-certified oil palm plantations

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Commissioned by the RSPO Biodiversity and HCV Working Group (BHCWWG).

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### Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ALS</td>
<td>Assessor Licensing Scheme</td>
</tr>
<tr>
<td>BHCVWG</td>
<td>Biodiversity and High Conservation Value Working Group (of the RSPO)</td>
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<tr>
<td>BMP</td>
<td>Best Management Practice</td>
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<tr>
<td>BRG</td>
<td>Badan Restorasi Gambut (Indonesian Peatland Restoration Agency)</td>
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<tr>
<td>CB</td>
<td>Certification Body</td>
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<tr>
<td>CSO</td>
<td>Civil Society Organisation</td>
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<tr>
<td>CSR</td>
<td>Corporate Social Responsibility</td>
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<tr>
<td>E&amp;S</td>
<td>Environment and Sustainability</td>
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<tr>
<td>EIA</td>
<td>Environmental Investigation Agency</td>
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<tr>
<td>FPIC</td>
<td>Free, Prior and Informed Consent</td>
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<tr>
<td>FPP</td>
<td>Forest Peoples Programme</td>
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<tr>
<td>GIS</td>
<td>Geographic Information System</td>
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<td>GFW</td>
<td>Global Forest Watch</td>
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<td>HCV</td>
<td>High Conservation Value</td>
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<tr>
<td>HCVRN</td>
<td>High Conservation Value Resource Network</td>
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<tr>
<td>HGU</td>
<td>Hak Guna Usaha ('Right to Exploit'): land tenure lease under Indonesian law</td>
</tr>
<tr>
<td>M&amp;M</td>
<td>Management and Monitoring (of HCVs)</td>
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<tr>
<td>MT</td>
<td>Megaton</td>
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<tr>
<td>NPP</td>
<td>New Planting Procedure</td>
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<tr>
<td>NTFP</td>
<td>Non-Timber Forest Product</td>
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<tr>
<td>P&amp;C</td>
<td>Principles and Criteria</td>
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<tr>
<td>RSPO</td>
<td>Roundtable on Sustainable Palm Oil</td>
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<tr>
<td>RTE</td>
<td>Rare, Threatened or Endangered species</td>
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<tr>
<td>SEIA</td>
<td>Social and Environmental Impact Assessment</td>
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<tr>
<td>SMART</td>
<td>Spatial Monitoring and Reporting Tool</td>
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<tr>
<td>SOP</td>
<td>Standard Operating Procedure</td>
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<tr>
<td>SPOTT</td>
<td>Sustainable Palm Oil Transparency Toolkit</td>
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<td>ZSL</td>
<td>Zoological Society of London</td>
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Executive summary

Introduction

High Conservation Values (HCVs) are biological, ecological, social or cultural values of outstanding significance or critical importance. For example, important populations of endangered species and critical sources of fresh drinking water are both HCVs. Under the Roundtable on Sustainable Palm Oil (RSPO) standard, certified palm oil producers must ensure they do not damage or destroy any HCVs identified in or around their operations, and any HCVs that are identified must be managed and monitored to ensure they are maintained and enhanced. Although RSPO member companies understand how HCVs are identified, they are less well informed about how HCVs should be managed and monitored.

This study, commissioned by the RSPO Biodiversity and High Conservation Value Working Group (BHCVWG), investigated the challenges to effective HCV management and monitoring (M&M) in oil palm plantations and provided preliminary recommendations for addressing these challenges.

A semi-structured interview survey was conducted with 19 representatives of 16 palm-oil producing companies from 10 countries in Latin America, Southeast Asia and West Africa. Semi-structured interviews were also conducted with members of six village communities located in or near oil palm plantations in West Kalimantan and South Sumatra in Indonesia. Findings from the company and community surveys were supplemented by a literature review.

Key findings

Management and monitoring practices

Most companies surveyed had active HCV management plans and HCV monitoring plans. Management activities were generally similar between companies and regions. Most companies described using patrols, signage, staff and community education, demarcation of river buffer zones, hunting bans and burning bans. There was also relatively little variation in the monitoring activities practised between companies and regions. Monitoring activities typically included flora and fauna surveys, water quality monitoring and patrols to detect prohibited activities, such as poaching or encroachment. Despite the similarities in M&M activities described between companies and regions, there was a wide variation in participants’ reports of the resources allocated to M&M and the quality of M&M.

Our study also revealed that numerous challenges are encountered with M&M, which may put HCVs at risk of damage or destruction.

Management and monitoring challenges

Four categories of M&M challenges were identified in the company survey. These were:

- **Technical challenges** including insufficient expertise or experience to implement M&M activities, and practical challenges such as the large sizes of HCV areas to be patrolled;
- **Economic challenges** including inadequate allocation of resources to M&M, perceived high costs of maintaining HCV areas and perceived business costs, such as lost planting opportunities;
• **Collaboration challenges** including insufficient government support and regulation, especially in Indonesia, and reliance on neighbouring land users to ensure effective M&M at the landscape level; and

• **Social and community engagement challenges** including lack of awareness among local communities and the problem of how to deal with individual transgressions in HCV areas.

Of the four categories of M&M challenges identified, social challenges were the most concerning. Companies perceived the greatest threats to HCVs to be posed by hunting, logging and encroachment by local people, yet few companies were actively engaged in co-management with local communities. Community engagement was explored in depth in the community survey.

**Community engagement in management and monitoring**

The community survey corroborated the findings of the company survey and showed community involvement in M&M to be deficient. In only two of the six communities surveyed had villagers been organised to participate in M&M teams. Even in these cases, community members had variable comprehension of what the HCV approach is.

As well as deficient community involvement in M&M, findings from the community survey suggested that community participation in HCV identification was absent or token in the study villages, with two exceptions. The majority of interviewees claimed they knew little or nothing about HCVs and could not point out any local HCV areas.

**Recommendations to improve HCV management and monitoring**

Based on the findings of the company survey, the community survey and the literature review, the following recommendations are proposed as a pathway to establishing best-management practices (BMPs) for HCV M&M. The development of validated guidance on BMPs will require further research, including field studies of M&M practices and challenges (see ‘Further Work’, below).

As a first step, the RSPO, HCV Resource Network (HCVRN) and supporting stakeholders, including civil society organisations (CSOs) and leading companies, should undertake the following activities to increase the uptake and implementation of previously-established best practices:

1. **Promote the use of existing guidance and resources**, including the Common Guidance for HCV Management and Monitoring (Brown & Senior 2014), to improve companies’ understanding and awareness of potential M&M strategies. The RSPO could consider creating an M&M module in its online ‘Sustainability College’ to house these and other resources.

2. **Communicate the minimum requirements for community participation in HCV identification** to ensure that HCVRN requirements are observed and communities are properly involved in HCV identification. Communications activities should be targeted towards growers and HCV assessors at training events and conferences, and through other channels.

3. **Communicate the minimum requirements for community participation in M&M plans** (as for Recommendation 2, above) to ensure communities are properly involved in M&M plan development and activities, and co-management is practised where possible.

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1 Note: these HCV assessments did not undergo quality control by the HCV Assessor Licensing Scheme [ALS].
4. Communicate the commercial benefits of the HCV approach to incentivise the allocation of sufficient resources to M&M.

The adoption of sound M&M practices should also be supported by the development of specific guidance and templates. With support from the RSPO and relevant CSOs, the HCVRN should:

5. Create standard templates for HCV management and monitoring to raise awareness of the key components of M&M plans, including adaptive management, and help companies develop their own, tailored plans. Generic monitoring indicators could be developed to support companies with developing their own indicators. Subject to further research, a short set of standard monitoring protocols could also be developed for use in all HCV areas to enable a global comparison of the effectiveness of HCV management strategies.

6. Develop new guidelines to set out the options and requirements for community involvement in M&M. Any new guidelines, including guidelines for community engagement, should be in accordance with existing HCVRN guidelines. Written agreements should be established with communities about the use of HCV areas and involvement in M&M.

7. Support companies to identify M&M priorities to ensure resources allocated to HCV protection are used efficiently. The HCVRN already requires HCV assessors to make focussed recommendations to companies in HCV assessment report templates and these could be bolstered by new guidance for companies on how to use reports to develop M&M plans.

Palm oil-producing companies must also take steps to improve their own M&M practices. Companies should:

8. Foster a culture of knowledge-sharing and exchange, potentially through structured learning networks and large-scale training programmes to promote knowledge exchange between leading companies and other growers, and encourage peer-to-peer support on effective M&M strategies. The RSPO may provide a useful platform for the establishment of such networks and programmes.

9. Engage in landscape-level collaborative management of HCVs to ensure that HCVs which extend across and beyond concession boundaries are maintained and enhanced effectively.

10. Minimise M&M costs by using monitoring outputs to inform management activities (i.e., adaptive management), to ensure optimal use of limited resources and effective M&M prioritisation.

Specific recommendations for the RSPO
The following actions are specifically recommended for the RSPO (with support from the HCVRN where necessary) to raise the standard of M&M practices among its members.

1. Engage with the Indonesian legislative process and HCV Network Indonesia to ensure that any new Indonesian HCV legislation uses the global HCV definitions appropriately.

2. Adopt stricter requirements for community engagement in M&M to ensure that communities are appropriately involved in co-management of HCV areas.

3. Carry out randomised field checks of HCV assessments in coordination with the HCVRN to promote improvements in the quality of assessments and ensure community participation. Assessment checks should be carried out in established plantings as well as new plantings.
4. **Provide guidance and training for CBs and auditors**, in partnership with the HCVRN, to ensure better adherence to M&M requirements. Training should seek to improve auditing of M&M effectiveness and develop capacity to use innovative HCV area maps and alerts – due to be launched on Global Forest Watch (GFW) later this year – for real-time monitoring of HCV areas.

5. **Require companies to use the outputs of monitoring activities to adapt management plans.** Management plans should be updated annually using the outputs of SMART monitoring indicators.

6. **Include a reference to the Common Guidance for Management and Monitoring of HCVs in the new RSPO Principles and Criteria.**

**Further work: Phase 2 research**

This study was a rapid assessment of the state of play of HCV M&M among RSPO member companies. It was subject to a number of limitations including a small sample size and possible response bias. It was also not possible to objectively assess the effectiveness of specific M&M strategies and activities in the field due to limited available budget and time. A follow-up study (Phase 2) is now required to field-truth the findings of the present study and confirm the pathway to development of BMPs that has been proposed. Once the Phase 2 study has been completed, it will be possible to provide validated guidance on BMPs for M&M and develop robust solutions to M&M challenges.
1. Introduction

The High Conservation Value (HCV) Approach is one of the key tools used by the Roundtable on Sustainable Palm Oil (RSPO) to ensure sustainable palm oil production. HCVs are biological, ecological, social or cultural values of outstanding significance or critical importance. For example, important populations of endangered species and critical sources of fresh drinking water are both HCVs. The HCV approach requires the identification, management and monitoring of HCVs in a given area.

HCVs are identified in a process called an HCV assessment. Once an assessment has been completed, management activities must be undertaken to ensure that any HCVs present are protected. HCV management activities may include demarcating areas where HCVs have been identified, enforcing hunting bans, or other practices. The objective of HCV management is to ensure that HCVs are maintained or enhanced in the long-term, so that the quality of the HCV (what makes a value significant or critical) does not degrade or reduce over time. HCV monitoring activities are practices used to assess the effectiveness of management activities, such as flora and/or fauna surveys.

Detailed guidance on HCV management and monitoring (M&M) is provided by the HCV Resource Network (HCVRN) in the Common Guidance for Management and Monitoring of HCVs (Brown & Senior 2014).

To comply with the RSPO standard, certified palm-oil producers must practise the HCV approach and ensure they do not damage or destroy any HCVs identified in or around their operations, whether these are new or expanding plantings (RSPO Criterion 7.3), or existing plantings (Criterion 5.2). Furthermore, they must ensure that their estates and mills are managed in such a way that any HCVs present are maintained or enhanced. The RSPO New Planting Procedure (NPP) has required HCV assessments to be undertaken for all new plantings since January 2010. Since January 2015, the NPP has required all HCV assessments to be conducted by an HCV assessor licensed by the HCVRN’s Assessor Licensing Scheme (ALS), which was launched in October 2014. Through its quality control processes, the ALS helps to ensure that HCV assessments are carried out at an acceptable standard and HCVs are adequately identified. Since the establishment of the ALS, 361,468 ha of oil palm estates have undergone an HCV assessment in accordance with the NPP. Of these, 88,055 ha have been identified as HCV management areas and have not been planted with palm oil. Many thousands more hectares of HCV management areas were established in RSPO-certified oil palm plantations prior to the establishment of the ALS.

Despite the successful establishment of thousands of hectares of HCV areas, RSPO member companies’ M&M practices may not always be sufficient to maintain and enhance HCVs in the long term. For example, a simple Geographic Information System (GIS) assessment of oil palm concessions that passed the NPP in 2011 or 2013 suggests that deforestation may continue in some HCV areas, even though the overall rate of deforestation declines following plantation establishment (Box 1). Indeed, the RSPO Biodiversity and High Conservation Value Working Group (BHCVWG) has noted that although RSPO member companies seem to understand how HCVs are identified, they are less well informed about how HCVs should be managed and monitored. Companies also face a variety of challenges with M&M.

The establishment of the ALS should have helped to address some of the challenges faced by companies with M&M. For example, by providing clear guidance for HCV assessors and establishing a minimum standard for HCV assessment reports, the ALS ensures that companies receive clearer, tailored recommendations on the M&M activities needed in their plantations. However, the ALS is still relatively new, so its impacts on M&M are not yet widespread. Furthermore, the ALS is focussed...
on ensuring adequate HCV identification, rather than M&M, and under the RSPO standard it has only been required for all new plantings since November 2015; it is not required for established plantings. As such, the potential impact of the ALS on M&M across all RSPO-certified oil palm plantations is limited. There is therefore a persisting need to assess whether HCVs are being effectively conserved in RSPO-certified plantations, what challenges are faced by companies and how these should be addressed.

In early 2016, the BHCWG commissioned a partnership of consultancies and civil society organisations (CSOs) to study the challenges to effective HCV M&M in oil palm plantations, and to provide preliminary recommendations for addressing these challenges. The project partners were the HCVRN, Daemeter Consulting, Forest Peoples Programme (FPP), Proforest and the Zoological Society of London (ZSL).

This project investigated HCV M&M challenges through interviews with palm-oil producers (growers) in Latin America, Southeast Asia and West Africa, and interviews with local communities in Indonesia. The project had three key objectives:

1. Identify barriers and challenges to HCV management effectiveness;
2. Provide preliminary lessons and guidance on key challenges; and
3. Outline a pathway to developing best management practices (BMPs) for addressing outstanding challenges.

Given the presumably complex, multi-faceted nature of M&M challenges, it was not expected that the project would generate solutions to all the problems it identified. However, preliminary recommendations have been made to provide the target audience of this report – the RSPO, as well as RSPO-certified palm-oil producers, HCV assessors, RSPO certification bodies (CBs) and auditors, and other interested stakeholders – with preliminary recommendations for steps to improve M&M practices. These recommendations also provide the basis for the development of a larger programme of work on best practices for HCV M&M.
To provide context for our research, we conducted a simple GIS analysis to compare the rate of deforestation (‘tree cover loss’) in HCV areas before and after NPP notification (used as a proxy for plantation establishment), in cases where the RSPO NPP was carried out. The objective of this was to try to understand: a) whether forest loss rates change after designation of areas as HCV areas; and b) whether forest cover loss continued within HCV areas.

To answer these questions, our collaborators from the University of Hawaii, University of York and University of California, Santa Barbara ran a GIS analysis on a selection of 128 HCV areas covering 29,948 ha from 18 palm oil supply bases (comprising multiple estates) in Kalimantan that passed the NPP in 2011 or 2013. This analysis was run using the Google Earth Engine and used Hansen tree cover loss data (Hansen et al. 2013). The analysis calculated the following information:

1. The percentage of the HCV areas covered in forest in year 2000 (defined as >90% canopy cover), and
2. The rate of tree cover loss (‘deforestation’) in the HCV areas each year from 2001–2014.

These data were then used to calculate the average annual deforestation in the HCV areas before and after NPP notification (as a proxy for plantation establishment).

The main findings of the analysis were:

1. Of the HCV areas assessed, only 43% was considered ‘forest’ (>90% canopy cover) in the year 2000, suggesting that most areas were already degraded well before plantation establishment; and
2. The rate of deforestation in HCV areas declined considerably following NPP plantation establishment, dropping from a mean of 1.4% of HCV area per year before establishment to 0.43% after establishment.

These findings suggest that designating areas as HCV areas may protect them from further deforestation, although this hypothesis would require testing using robust counterfactual analyses. However, there was still some deforestation in HCV areas after NPP notification, suggesting that improvements in M&M are needed to improve protection. Furthermore, forest cover in the HCV areas analysed in this sample was very low, suggesting that companies may need to invest more in rehabilitation or restoration of forest in their HCV areas. This analysis therefore reinforced the need for a study to identify the challenges to effective HCV M&M in oil palm plantations and outline a pathway to developing best management practices (BMPs).

Note: This analysis was conducted on a small sample size and may not be indicative of trends across RSPO plantations. This method does not account for forest regrowth or consider different types of HCVs that may not be designated for their forest cover. It is also possible that HCVs have been removed or altered since these reports were published. These HCV assessments predated the ALS, so ALS quality control procedures were not applied and assessments may have been of varying quality.

1 Kim Carlson (University of Hawaii), Sarah Scriven (University of York) and Robert Heilmayr (University of California, Santa Barbara).
2 The Carlson lab is in the process of digitising and analysing plantation boundaries and HCV areas from NPP reports for RSPO estates in Kalimantan. The areas used for this analysis represented the subset of those plantation boundaries and HCV areas digitised so far for which NPP reports were published before 2014.
3 Hansen forest cover data define “all vegetation taller than 5 m in height” as forest (Hansen et al. 2013). As oil palm trees may be over 5 m in height, Hansen data may conflate forest cover with oil palm trees in oil palm plantations (Tropek et al. 2014). The findings of this simple analysis should, therefore, be interpreted with caution and are indicative of possible deforestation trends only.
4 Some of these plantations were part of existing plantings, so some HCV areas may have been established prior to the date of NPP notification.
5 95% confidence intervals: Pre-establishment = 1.04–1.68; Post-establishment = 0.22–0.64.
2. Methods

This project comprised three components: a literature review, a survey involving palm oil-producing companies (the company survey) and a survey involving communities living in or around oil palm plantations (the community survey; Box 2). A brief summary of the methods for each of the company and community surveys is provided here. A more detailed overview of the methods for each project component is given in Appendix 1. The company and community survey questionnaires can be found in Appendices 2 and 3.

Company survey
Semi-structured interviews were used to investigate the range of HCV management and monitoring (M&M) practices used by palm oil companies, as well as the barriers and challenges experienced. Participants were ‘expert informants’ including field-level HCV or plantation managers, and corporate group-level sustainability managers. Interviews were conducted either in person or by Skype and followed an interview guide developed by the project partners. A qualitative method loosely based upon the Framework Approach (Ritchie & Spencer 1994) was used to analyse responses. Some quantifiable elements of the responses to interview questions were also extracted from the data (e.g., proportion of participants with formal M&M plans). Due to the non-random sampling technique, small sample sizes and semi-structured interview method, extensive quantitative analysis was not possible. All quantitative data presented must be interpreted with caution (these data are not necessarily representative of trends between companies or regions).

Community survey
The community survey also used a semi-structured interview method. Community interviews were conducted in person in South Sumatra and West Kalimantan, Indonesia. Due to the limited time and budget available for this study, sampling had to be conducted opportunistically during previously-planned field trips. For this reason, the community interviews did not correspond with sites sampled in the company survey. Community interviews were carried out in informal settings with community representatives including community leaders and those engaged in HCV M&M. The community interviews followed an ethics procedure described in Appendix 1.

Study limitations
This study was subject to a number of limitations due to available time and funding. As such, its findings are indicative of the state of play regarding HCV M&M, rather than a comprehensive assessment of the quality of company, consultancy or community performance in applying the HCV approach. Nevertheless, the findings have important implications for the improvement of HCV M&M in pursuit of the RSPO objective of assuring sustainable palm oil production. Preliminary recommendations are provided in Section 5 of this report.

Box 2. ‘Companies’ and ‘communities’
Companies: the majority of companies that participated in this study were large corporations with access to considerable resources. However, there are also many small- and medium-sized enterprises (SMEs; <500 MT of palm oil production/year) and smallholders (<50 ha planted oil palm) involved in palm oil production (RSPO 2017), which have considerably fewer resources at their disposal. It should not be assumed that the findings of the company survey are representative of or applicable to all palm oil producers.

Communities: the communities investigated were villagers living in or around oil palm plantations in South Sumatra and West Kalimantan. However, the composition of communities living in or around oil palm plantations may vary widely, comprising indigenous peoples and/or village or town residents depending on the country and region. Communities’ livelihoods may also vary widely and community members may or may not be employed by the local oil palm plantation. It should not be assumed that the findings from the community survey are applicable to all communities living in or around oil palm plantations.
3. Results

Findings from each of the three project components are presented together and arranged thematically. Raw data consisted of lengthy, qualitative interview notes and transcripts. Consequently, a synthesis of the key findings is presented, rather than the data themselves. Key findings are presented here. Some additional results to complement the key findings are presented in Appendix 4 (company survey) and Appendix 5 (community survey).

It should be noted that the majority of companies represented in the company survey had HCV assessments undertaken prior to the establishment of the ALS.

3.1. Participant demographics

3.1.1. Companies

In total, 19 interviews were conducted with representatives of 16 palm-oil producing companies covering 10 countries in Latin America, Southeast Asia and West Africa (Figure 2). For three companies, interviews were conducted with two representatives (in each of these cases, both a group-level sustainability manager and a field-level HCV or plantation manager were interviewed). Participants’ names and companies have been removed to protect their anonymity. Individual participants are referred to by their country or region only.

![Figure 2](image) Countries covered by the company interviews (in green): Brazil, Costa Rica, Guatemala, Honduras, Indonesia, Malaysia, Mexico, Nigeria, Papua New Guinea and Sierra Leone. Note: interviews with some company representatives covered more than one country.

3.1.2. Communities

Community interviews were conducted with members of six different administrative villages (desa), three of which were located in Kabupaten Kapuas Hulu in West Kalimantan (Desa Nanga Suhaid, Desa Mantan and Desa Menapar) and another three in Kabupaten Musi Banyuasin in South Sumatra.
(Desa Pulai Gading, Desa Mendis and Desa Mangsang). Interview groups ranged in size from 2–17 participants.

3.2. Current HCV management and monitoring practices

3.2.1. HCV management and monitoring plans

Most companies surveyed had active HCV management plans (12/16 companies, 75%) and monitoring plans (11/16 companies, 68.75%) in place (Table 1). Companies that did not have active management and/or monitoring plans in place claimed this was either because no HCVs had been identified in the original HCV assessment; because the HCV assessment had only recently been completed and M&M activities had not yet begun; or because any HCVs identified were located outside the company’s plantation area. Regardless of whether a formal M&M plan had been established, all companies represented stated that they undertook environmental M&M activities in some form.

Companies’ M&M plans primarily consisted of lists of specific activities (see Section 3.2.3) and/or the implementation of Standard Operating Procedures (SOPs). None of the companies mentioned the inclusion of specific objectives or targets in their M&M plans. Companies also did not report measuring the impacts of their plans using objectives or targets. Participants’ responses were often general and suggested a degree of conflation between the management and monitoring processes.

As the companies operating in Latin America and West Africa had only recently completed their HCV assessments, their M&M plans were in early stages of implementation and had not been through a process of reporting or revision. In contrast, the Southeast Asian companies’ M&M plans were more established.

Notably, three participants representing companies in Indonesia reported that HCV management area boundaries had changed since the original HCV assessments. They claimed this was because the reality of field conditions differed from the maps developed in the original HCV assessments. For example, one participant said the maps in the HCV assessment showed rivers or lakes which “did not exist”. Although these participants claimed that changes to the HCV management areas were minor, it is important that HCV assessment maps accurately reflect the reality in the field.

3.2.2. Resourcing

There was wide variation between companies in the resources (staff and budgets) dedicated to HCV M&M. Teams involved with M&M (including both dedicated teams and teams with other responsibilities) ranged in size from 4–30 people. Six of the eight Southeast Asian companies (75%) reported having a dedicated budget for HCV M&M (the two remaining companies did not answer this question). Only the Latin American companies reported the annual budgets they were spending on HCV management; these ranged from no specific budget to $1 million USD annually plus $100,000 USD for biodiversity monitoring. Of the West African companies, one reported spending 0.5% of turnover on health, safety and environment (HSE), including HCV M&M.
Table 1. Summary of the key features of M&M in each of the three company survey regions.

HSE = Health, Safety and Environment.
*In the case of three companies, interviews were conducted with two representatives.

### 3.2.3. HCV management activities

Management activities were generally similar between companies and regions. Most companies described using patrols, signage, staff and community education, demarcation of river buffer zones, hunting bans and burning bans. The most prominent management activities did show some
variation between regions, however; riparian zone management and wildlife protection were emphasised by companies in Southeast Asia and West Africa, and staff education in Latin America (Table 1). A smaller range of management activities was described by participants from companies in West Africa.

The full range of management activities described by participants is summarised in Table 2. Patrolling and community awareness-raising were often perceived as being the most important HCV management activities.

<table>
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<td>• Avoidance of chemical use in riparian zones</td>
<td>• CSO collaboration</td>
</tr>
<tr>
<td>• Burning bans and no-burning policies</td>
<td>• Patrols</td>
</tr>
<tr>
<td>• Community awareness-raising</td>
<td>• Riparian zone demarcation</td>
</tr>
<tr>
<td>• Community consultation</td>
<td>• Riparian zone enrichment</td>
</tr>
<tr>
<td>• Community education</td>
<td>• Riparian zone management</td>
</tr>
<tr>
<td>• Fire prevention</td>
<td>• Signage placement</td>
</tr>
<tr>
<td>• HCV area boundary marking</td>
<td>• Staff education</td>
</tr>
<tr>
<td>• Guard hire and training</td>
<td>• Tree planting</td>
</tr>
<tr>
<td>• Hunting/poaching bans</td>
<td>• Wildlife care and reintroductions</td>
</tr>
<tr>
<td>• Logging bans</td>
<td>• Wildlife protection</td>
</tr>
</tbody>
</table>

Table 2. Management activities mentioned by company participants. CSO = Civil Society Organisation.

Management activities tailored to companies’ specific plantations or regions often consisted of the management of rare, threatened or endangered (RTE) species. Six of the ten Southeast Asian and West African companies (60%) mentioned site-specific wildlife management activities. For example, one company described working with a CSO to care for and release gibbons, and another described taking measures to prevent human-elephant conflict. Among the Latin American participants, management activities were more generic and included patrols, use of signage (e.g. ‘no hunting, no logging and no fishing’) and environmental education.

No participants mentioned management activities specific to HCV 5 (sites and resources fundamental for satisfying the needs of local communities) other than riparian or wetland management. This may have been a result of the fact that some plantations were located far from large and/or indigenous settlements. Several participants referred to HCV 6 (sites and resources of cultural, archaeological or historical significance), but few mentioned specific management activities. Two Indonesian companies described detailed management activities for HCV 6 cultural sites, including site demarcation, cleaning and maintenance, such as trimming weeds. One of these companies described working closely with the local community to accommodate sensitivities, such as acknowledging which sites the company was permitted to clean and when. Another participant from a company operating in West Africa mentioned the importance of aligning M&M policies with local chiefdom bylaws.
3.2.4. HCV monitoring activities

Monitoring activities were generally similar between companies and regions. Monitoring activities typically included flora and fauna surveys, water quality monitoring and patrols to detect illegal activities such as hunting, encroachment and timber extraction. The range of monitoring activities mentioned by participants is summarised in Table 3.

<table>
<thead>
<tr>
<th>Monitoring activities</th>
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</thead>
<tbody>
<tr>
<td>• Ad hoc staff observations</td>
</tr>
<tr>
<td>• Community feedback meetings</td>
</tr>
<tr>
<td>• Flora and fauna surveys</td>
</tr>
<tr>
<td>• Forest health monitoring</td>
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<tr>
<td>• Incident (illegal activity) monitoring</td>
</tr>
<tr>
<td>• Patrons</td>
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<tr>
<td>• Partnerships with conservation CSOs</td>
</tr>
<tr>
<td>• RTE species surveys</td>
</tr>
<tr>
<td>• Water quality monitoring</td>
</tr>
<tr>
<td>• ZSL SMART</td>
</tr>
</tbody>
</table>

Table 3. Monitoring activities mentioned by company participants. CSO = Civil Society Organisation; RTE = Rare, Threatened and Endangered species; SMART = Spatial Monitoring and Reporting Tool.

In general, the monitoring activities described by participants were generic and appeared to be undertaken in an ad hoc fashion. Data were frequently recorded during guard patrols rather than using a systematic approach involving purpose-designed routes, techniques or schedules. However, two company representatives reported engaging in major collaborations with conservation CSOs and universities on annual biodiversity surveys, as well as collaborating with local national park staff to train ecoguards. Another participant mentioned using the ZSL Spatial Monitoring and Reporting Tool (SMART) and two others mentioned the use of camera traps, nets, transects and rapid surveys.

Few participants described systematically using the outputs of their monitoring activities to adapt their management plans and none used the term ‘adaptive management’. Two Indonesian companies mentioned modifying their management activities after reviewing inspection results or based on community feedback. One of these companies described how communities that were unhappy with HCV 6 maintenance reported this back to the company during regular meetings. The other company described modifying its wildlife survey based on an evaluation of its methods and subsequent recommendations by a third-party institution.

Only one participant mentioned specific monitoring activities for HCV 5 other than riparian monitoring, which was frequently cited. It should be noted, however, that only three participants specifically mentioned the presence of HCV 5 on-site. The Indonesian companies that described detailed management activities for HCV 6 claimed to monitor the condition of HCV 6 cultural sites annually. Two Indonesian companies reported that community feedback serves as an unquantifiable but tangible gauge of the impacts of management activities.

3.2.5. Tailoring and prioritisation

The homogeneity of M&M activities observed between companies and regions suggests companies were not always practising activities tailored to their individual plantations. This may have been partially attributable to long lists of HCVs identified in the original HCV assessment reports, which could have made pursuing a few generic M&M activities appear more efficient than undertaking numerous specific activities for different HCVs.
It is also possible that the M&M recommendations provided in some HCV assessment reports were inadequate, as these typically form the basis for subsequent M&M activities. Where recommendations were insufficiently specific, this could have caused confusion over which M&M activities were most important, hindering prioritisation.

Companies’ M&M activities should be monitored to ascertain whether prioritisation continues to be a challenge. **Guidance should then be provided with recommendations on how companies can prioritise specific activities** (for example, surveys of keystone species rather than general flora and fauna surveys; see recommendations to address ‘Technical Challenges’ in Section 5.2).

### 3.3. Threats to HCVs

**Reported threats to HCVs were similar between Southeast Asia and West Africa, and mostly related to local community activities.** The most frequently reported threats were related to community activities and included hunting and poaching (10/16 companies, 63%), illegal logging and timber extraction (9/16 companies, 56%) and encroachment into HCV areas (8/16 companies, 50%). Other commonly-reported threats were fires and disputed land claims, although disputed land claims were only reported by companies operating in Indonesia. Two of the Indonesian companies claimed that the economic drivers of burning and encroachment by local communities were beyond their control. The range of threats to HCVs reported by participants are summarised in **Table 4**.

**Participants from the Latin American companies reported that no local communities lived in or around their plantations and reported a far smaller range of threats.** Two Latin American companies reported that there were no major threats to HCVs in their plantations whatsoever.

<table>
<thead>
<tr>
<th>Latin America</th>
<th>Southeast Asia</th>
<th>West Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>Disputed land claims</td>
<td>-</td>
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<tr>
<td>-</td>
<td>Encroachment</td>
<td>Encroachment</td>
</tr>
<tr>
<td>Fires</td>
<td>Fires</td>
<td>Fires</td>
</tr>
<tr>
<td>Illegal logging/timber extraction</td>
<td>Illegal logging/timber extraction</td>
<td>Illegal logging/timber extraction</td>
</tr>
<tr>
<td>-</td>
<td>Insufficient company capacity</td>
<td>-</td>
</tr>
<tr>
<td>Hunting/poaching</td>
<td>Hunting/poaching</td>
<td>Hunting/poaching</td>
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<tr>
<td>-</td>
<td>Invasive species</td>
<td>-</td>
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<tr>
<td>-</td>
<td>-</td>
<td>Other extractive activities (e.g. mining)</td>
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<tr>
<td>-</td>
<td>-</td>
<td>Pollution of rivers and soils</td>
</tr>
<tr>
<td>-</td>
<td>Poor community understanding</td>
<td>Poor community understanding</td>
</tr>
<tr>
<td>-</td>
<td>Use of poisons for fishing</td>
<td>-</td>
</tr>
</tbody>
</table>

**Table 4.** Threats to HCVs mentioned by company participants in each of the three regions. Numbers of respondents and proportions not shown due to the small, non-random samples and widely varying group sizes.
3.4. Challenges for effective HCV management and monitoring

The key challenges to HCV M&M perceived by company participants could be divided into four categories: technical challenges; economic challenges; collaboration challenges; and social challenges. This categorisation of challenges reflected our findings from the literature.

3.4.1. Technical challenges

Insufficient expertise and experience in conservation

Survey participants felt they lacked sufficient internal expertise and capacity to implement their M&M plans effectively. This was particularly the case for Latin American companies. One participant reported that an auditor had assessed his company as being non-compliant with RSPO requirements because its monitoring activities were “not good enough”, but he felt his company lacked an understanding of what would be considered “adequate”:

“We don’t know which monitoring activities are adequate so we are using different guidance documents to learn the right procedures to implement.” – Latin American participant

Interestingly, a lack of experienced internal social experts was not cited as a major problem by company survey participants, despite the numerous challenges with community engagement that were described (see Section 3.5.3.)

The literature supported our finding that the lack of experienced field conservationists among internal company staff is a problem for implementing HCV M&M plans. In Indonesia, the pool of biodiversity experts is relatively small and predominantly consists of highly-specialised individuals working in academia or civil society organisations (CSOs) rather than the commercial sector (Paoli et al. 2014). The lack of technical expertise within companies interacts with resourcing issues (see Section 3.4.2 on economic challenges), as HCV staff often fail to receive training on practical conservation and team management.

Linked to the general lack of experienced field conservationists is the fact that conservation in oil palm plantations is a wholly new discipline. Managing biodiversity in relatively small forest patches in active plantations is a new challenge, especially in the tropics, and all approaches and guidelines are new and evolving (Paoli et al. 2014). In addition, small, isolated forest patches often function as ecological traps or population sinks which struggle to retain biodiversity (Koh et al. 2009). Together, this combination of factors makes the job of HCV managers challenging, while incentives for good M&M practices may be limited to auditing requirements. In the case of HCV assessments for new plantings, it may be necessary for larger HCV areas to be established to ensure that HCVs can be effectively maintained in the long run. Further research is needed to investigate the best approach to dealing with insufficiently sized, isolated or otherwise inadequate HCV areas in the post-assessment phase.

A concerted effort has been made in recent years to build capacity and strengthen resourcing for M&M in the oil palm sector, including by grower companies. Attempts to address insufficient expertise and experience may benefit from greater efforts by the RSPO to learn from similar situations in other commodities and geographies.
Practical challenges
Practical challenges related to the implementation of M&M were also cited by participants in the company survey. Specific challenges included the large distances between plantations, the sheer sizes of HCV areas to patrol and the question of how to deal with armed poachers or encroachers. After HCV assessments are completed, companies feel “left on their own” to implement M&M activities. It was suggested that improved communication between the HCVRN and companies could help to provide companies with better support in addressing these issues.

3.4.2. Economic challenges
A number of participants in the company survey felt it is hard to justify the need for resources to implement M&M plans as the business benefits of protecting HCVs are not always obvious. It was also felt that M&M may restrict profits from oil palm development.

Similar economic challenges for effective HCV management were identified in the literature (Colchester et al. 2009; Paoli et al. 2014). These could be summarised in terms of: 1) inadequate allocation of resources due to poor understanding of the benefits of protecting HCVs among senior management teams; and 2) perceived high costs associated with maintaining HCV areas.

Inadequate allocation of resources to HCV management and monitoring
Our survey found great variability in the allocation of resources to M&M (see Section 3.2.2 on resourcing). Specific examples of challenges associated with resourcing were cited by participants. For example, a participant from one Latin American company said the cost of hiring external staff to implement M&M plans was too high, while another reported struggling to find professionals with sufficient capacity to carry out M&M activities (also see Section 3.4.1 on technical challenges).

According to the literature, there is a sense among many growers that M&M costs are a burden that divert resources away from the primary objective of oil palm production (Colchester et al. 2009). Very few growers have dedicated HCV teams and few companies have made the ideological shift of internalising these costs as part of their business model, with full support from senior management.

Perceived high costs associated with maintaining HCV areas
Many of the companies interviewed perceived high costs as a barrier to M&M. A number of participants in the company survey claimed that large HCV areas may be prohibitively expensive to manage and monitor. One participant suggested that a fund should be set up to provide companies with financial assistance for conservation activities.

“[We cannot have a no-deforestation policy with no assistance to conserve. A fund should be set up to fund HCV management and monitoring, perhaps through the sale of carbon. Payments could be based on Key Performance Indicators (KPIs); for example, no establishment of gardens within HCV areas. This should be a private sector rather than a governmental initiative.” – Southeast Asian Participant

RSPO members, including mid-sized and downstream consumer goods companies, could make a greater effort to explore and emphasise the business case for M&M, including both positive examples of compliance and negative examples of non-implementation. Positive examples could
include the market access afforded by good environmental practice. Negative examples could include the costs incurred by companies after mismanagement of HCVs, including lost business and reduced share prices, and damaged or diminished ecosystem services. To be effective, the business case must be supported by increased capacity and funding in producing countries to ensure practical M&M implementation is possible. There is also an ongoing debate about the costs of conservation in sustainable commodity production, which is a hot topic among users of the HCS Approach and other groups. This offers an excellent opportunity for the RSPO to explore potential solutions, which could include payments for ecosystem services or carbon credits.

3.4.3. Collaboration challenges
The company survey revealed that Indonesian companies perceive a lack of government support and regulation to be an important challenge for effective M&M. The literature review indicated that ineffective collaboration with other stakeholders can also be a challenge. Both of these challenges are related to the issue of protecting HCVs within the wider landscape surrounding a plantation.

Government and regulatory challenges
Three Indonesian companies in the survey claimed that the lack of government support and regulation was a major challenge for M&M in their country, with three important effects. Firstly, the lack of regulation reduces the perceived validity of the HCV approach among local communities and means there are no sanctions or disincentives for encroachment. Secondly, the lack of regulation means that the HCV approach is perceived as being voluntary and non-essential by companies, and as such it requires unnecessary work and unrecoverable costs. This harms staff motivation to engage with the HCV approach and makes it difficult to advocate its importance within a company. Finally, the lack of supporting regulation means that HCVs can only be protected and managed within a company’s concession boundaries, thereby reducing the potential to create an impact in the wider landscape. It is therefore recommended that the RSPO and its members should make greater efforts to engage the Indonesian and other governments on the issue of HCV protection.

Collaboration with neighbours and other stakeholders
Effective HCV M&M in plantation landscapes relies on collaboration between neighbouring land users and third parties such as governments, CSOs and universities. Effective collaboration provides benefits including shared management responsibilities, shared efforts to address threats and access to third party expertise. Although the mantra of collaboration is now widely repeated, especially in the era of landscape and jurisdictional approaches, it is still not the norm in the palm sector at the site level. Some growers continue to view collaboration as conflicting with their commercial objectives, but management of all HCVs requires consideration of the wider landscape to understand habitat connectivity and other landscape-level factors.

Consideration of the wider landscape is especially important for HCVs on peat due to the geography and hydrology of peat domes. According to findings of the literature review, maintenance of peat forest relies on keeping the peat wet enough for the ecosystem to persist, which in turn means managing the entire peat dome. Drainage anywhere in a peat dome may produce dome degradation and forest collapse. Recent research suggests that even the eco-hydro model of peatland management used by pulp and paper companies such as APRIL fails to maintain peat systems in the long term (Hooijer et al. 2015). Although RSPO Principle 5.1 requires members to identify off-site environmental impacts, in practice, oil palm growers only have control over the environment within their concession boundaries. As such, their ability to maintain HCVs may be compromised by peat drainage outside their concessions.
3.4.4. Social challenges

A deeper discussion of the social and community engagement issues surrounding HCV M&M is covered in the next section on community engagement (Section 3.5).

Many companies in the interview survey felt that community engagement in the M&M is complex and involves a variety of challenges. It is not always clear which community activities should be permitted or prohibited in HCV areas. Individual cases of hunting or encroachment also tend to be nuanced and general policies may be inappropriate or inapplicable in specific cases.

“Community engagement and conflict with HCVs is complex. It is not always clear what you should allow by communities and what should be stopped.” – West African participant

Companies from Southeast Asia and West Africa cited a lack of awareness among local communities as a major challenge for HCV M&M. For example, local communities may have poor awareness of the importance of riparian zone conservation and cultural norms or traditions may actively promote farming in riparian zones, producing conflict with M&M policies.

Except for the Latin American companies, which did not have local communities living in or around their plantations, most of the companies interviewed agreed that effective social engagement is essential to mitigate M&M challenges. It was also noted that social engagement is an ongoing process that is expensive in terms of both money and time.
3.5. Community engagement in HCV management and monitoring

This section summarises our research on community engagement in HCV management and monitoring. It is organised into three sub-sections: a summary of the literature review; findings from the community survey; and findings on community engagement from the company survey. Further results and background from the community survey can be found in Appendix 4.

3.5.1. Literature review

FPP have undertaken several pieces of research in Indonesia to investigate the challenges faced by companies when engaging with local communities on HCV M&M (Colchester et al. 2009; Colchester et al. 2011).

In a case study from Central Kalimantan, FPP found that community encroachment into HCV areas was common, especially in HCV 4 areas alongside rivers (Colchester et al. 2011). This supports the findings of the company survey regarding community-based HCV threats. Colchester et al. (2011) determined that encroachment occurs either when communities view land as unused or when resentment develops. The development of resentment may have several possible causes:

1. Inadequate identification of social HCVs and customary use areas prior to oil palm development, resulting in insufficient land being set aside for communities;
2. Insufficient engagement and awareness-raising about HCVs by growers; or
3. Insufficient community benefits from oil palm developments in legacy cases where the Indonesian plasma programme was not implemented (the programme requires palm oil companies above a certain size to allocate at least 20% of a concession area to scheme smallholder plots for local community members). In Central Kalimantan, for example, many growers have not implemented the Indonesian plasma programme because it only became compulsory in 2013.

Another threat to HCV areas is communities’ use of fire for land clearing (Colchester et al. 2011). Again, this supports the findings of the company survey. Although burning is the traditional way of opening farmland for many communities in Indonesia, it may threaten HCV areas if fires are lit on or near (drained) peatland, or if they spread out of control.

The FPP reports concluded that community-led HCV management or community-company co-management must be practised if possible to ensure community buy-in with M&M. However, community involvement in HCV 1–4 management will only work if appropriate engagement and communication activities are undertaken.

3.5.2. Community survey

Community survey location and participant demographics

Interviews were conducted in six desa (administrative villages), three of which were located in Kabupaten Kapuas Hulu in West Kalimantan and three in Kabupaten Musi Banyuasin in South Sumatra (Figure 2). The participant communities’ lands were overlapped by the operations of several majority-owned subsidiaries of RSPO member companies, as well as a pulpwood company which also used the HCV approach.
Local economy and community use of natural resources and HCV areas
All the communities surveyed had natural resource-based economies and were reliant on daily access to the surrounding forests, lands and waters. Traditional shifting cultivation techniques were supplemented by rice cultivation, small-scale cash-cropping of rubber and oil palm, and fruit and vegetable cultivation (Figure 3). Use of non-timber forest products (NTFP) was important for medicines, food, construction materials and fuel wood. In some villages, limited areas had been provided by the palm oil companies as smallholdings but these did not yet provide significant incomes. Wage labouring for the local palm oil companies was a major source of income for many.

Community comprehension of HCV and participation in HCV identification
Comprehension of the HCV approach and participation in HCV identification was deficient in all communities investigated, despite all of their lands overlapping with oil palm plantations being managed for RSPO members.

In all the communities surveyed in South Sumatra, interview participants professed almost no knowledge of HCVs and had not been involved in their identification. HCV documentation had not been shared with community members, except for one village head who had been provided with a copy of an HCV assessment report.

In West Kalimantan, where an RSPO member company was in the process of redoing its HCV assessment after being the subject of an RSPO complaint, community comprehension of the HCV approach was better but varied between communities. In one community, interview participants claimed the HCV approach had never been properly explained to them. They also had not participated meaningfully in HCV identification. According to participants from this village, the company and consultants presented the draft HCV assessment report to a select group of villagers during a meeting in the provincial capital, 12 hours away by road. The participants explicitly stated that they did not consider this presentation to constitute a consultation, let alone consent.
In the two other villages in the West Kalimantan concession, interview participants were better informed about the HCV approach but the role of HCVs in securing basic needs (HCV 5) was poorly understood. The need to protect HCV 4 (sources of water) and HCV 6 (sacred sites) was well accepted. Some community members noted that they had been consulted about their livelihoods and sacred sites, and were aware that HCV consultants were developing a land-use plan. In general, however, the assumption was that HCVs were areas set aside for conservation and could no longer be used by community members. Even in the community in West Kalimantan closest to the company offices, participants claimed they needed more training to properly understand the HCV approach.

**Community participation in HCV management and monitoring**

Community members were not adequately involved in M&M. Only in two of the six communities surveyed (33%, both in West Kalimantan) did interview participants say they participated in M&M. No participants from the communities surveyed in South Sumatra were involved with M&M.

In the two villages in West Kalimantan where interview participants were involved with M&M, monitoring teams had been assembled by volunteering or appointment. The leader of each team was responsible for monthly reporting to the company HCV manager. However, interview participants from these two communities could not distinguish between management and monitoring, even though the researchers made efforts to keep the two concepts distinct. The monitoring teams’ main duty was to monitor fires but they also reported illegal timber harvesting and land clearing. Only fires were mentioned as having actually been reported.

Several interview participants expressed resentment about the restrictions they perceived HCVs to impose on livelihoods and future generations’ access to farmland, with so much land having been surrendered to the companies’ oil palm plantations. The causes of such resentment may be multifactorial, including inappropriate issuance of the original plantation permit on community lands, transmigration and population increases, and other variables (see Section 3.5.1.). In the case presented here, however, community resentment appeared to be related to poor M&M practices by the companies, and potentially linked to poor quality of the original HCV assessments. The HCV approach does not advocate that communities should be excluded from HCV areas but, rather, encourages community involvement in M&M. As such, it appears that the companies in this case had a poor understanding of M&M best practice.
Note on HCV assessments: it is important to note that the HCV assessments for the plantations represented in the community survey did not undergo quality control by the ALS.

3.5.3. Company survey

Only one company (from Indonesia) reported soliciting community input on its M&M plans and outcomes. In general, companies tended to use a ‘top-down’, non-participatory management approach in which M&M activities were determined by the company with little community input.

Community use of HCV areas

Most of the companies interviewed permitted community use of HCV areas in their plantations. Variation in community use of HCV areas between different regions appeared to be a consequence of varying land tenure models. Overall, nine of the 14 companies^2^ (64%) that had HCV management areas within their plantations permitted community use of those HCV areas. Of the five companies that did not permit community use of their HCV areas, four were in Latin America, where communities do not typically live on company-owned plantations. The remaining company was in Malaysia, where communities do not typically use conservation management areas.

None of the nine companies that allowed community use of their HCV areas had a written agreement in place with the local communities. Three companies reported a verbal agreement and one described an agreed set of co-management activities. Five companies had no formal agreement in place with the local communities whatsoever, but permitted community use of HCV areas.

The most commonly-reported community use of HCV areas was fishing (7/9 companies, 78%). Other community uses included hunting, NTFP collection (including fruit, medicines, water and wood) and sacred site use.

Co-management

Company participants’ responses suggested that engagement in co-management with local communities was poor. Of the nine companies that permitted local communities to use HCV areas within their plantations, only four were engaged in co-management with communities (three in Indonesia and one in West Africa). Typical co-management activities included community patrols and monitoring (using community members as ecoguards), replanting deforested areas, information sharing and training on skills including administration, bookkeeping and photography. Companies that did not engage in co-management claimed this was because the local communities were unenthusiastic about management, because it was difficult to maintain communications or achieve the right approach, or because there were no communities using the HCV areas (Latin America).

Community engagement challenges

Engagement with local communities and co-management of HCV areas were perceived to be hindered by communication challenges and resource constraints. However, all the companies agreed that social engagement with communities is critical and helps prevent conflict over the protection of HCV management areas.

There appears to be a lack of understanding among companies about what is expected in terms of community engagement on M&M. Existing requirements for community participation in M&M plans should be communicated to companies and HCV assessors. It may also be worth developing a

^2^ N.B. Of the 16 companies included in the sample, one claimed that no HCVs were identified in the original HCV assessment and one claimed that HCVs were only identified outside its plantation.
specific set of guidelines to set out the options and requirements for community involvement in M&M. Where possible, written agreements should be made with communities regarding their use of HCV areas and their involvement in M&M. This is already required by the RSPO P&C as part of FPIC and it is included in the FPIC guide. The RSPO may also wish to consider setting up a module on community engagement with M&M in its online ‘Sustainability College’.
3.6. Conflicts of interest, incentives and enforcement

This section summarises our findings from the company survey and literature review on perceived conflicts-of-interest between companies’ commercial objectives and M&M, as well as potential incentives for and enforcement of M&M responsibilities, including RSPO oversight and auditing.

3.6.1. Conflicts of interest

Four companies (25%) explicitly stated that they perceived a conflict between HCV M&M and their companies’ other operations. These companies reported that M&M was not considered a top priority and it was seen as reducing land area available for planting. As one participant from a company operating in Southeast Asia stated, “the hardest part about M&M is changing the mindset about conservation and profit, both in the company and in communities”. The costs of M&M were also thought to be too high, meaning that corporate responsibility teams struggled to justify the resources needed. One interviewee suggested having a fund to support/compensate companies with large management areas, given the high costs of land rent and management of HCVs.

Despite the conflicts mentioned by some companies, others were aware of the importance of the HCV approach and claimed that it was well understood in their organisations. Companies listed numerous perceived benefits of HCV M&M including health, ecological and riparian benefits, positive corporate image, industry sustainability, pest control and the prevention of fire.

3.6.2. Enforcement

A review of the literature revealed several perceived enforcement weaknesses within the RSPO that can undermine effective M&M. These can be summarised into three broad issues: weaknesses with the NPP process; flaws with auditing established concessions (for RSPO Criterion 5.2); and flaws with the RSPO complaints procedure.

Weaknesses with the NPP process

According to RSPO rules, the NPP must take place prior to concession development and the associated HCV assessment lays the foundations for future HCV M&M. However, some aspects of the NPP process may also hinder the establishment and operation of M&M. These are described in detail below. Particular aspects of the NPP process that may be problematic include the FPIC verification process and the interim period between the completion of an HCV assessment and NPP notification, when no HCV management takes place.

FPIC verification during the NPP: FPIC negotiations between growers and communities can be finalised after the NPP is approved and this may hinder subsequent management of HCV areas. In their 2015 report ‘Who watches the watchmen’ two CSOs, EIA and Grassroots, criticised this process, claiming that “Certification Bodies can verify ‘consent’ where agreements have still not been made which, other than being illogical, raises questions as to what it is that communities are giving consent” (EIA & Grassroots 2015). As a result, communities may not know how much land (HCV 5 or otherwise) they will have access to until after the NPP is finalised. This means that in some cases, the negotiated HCV area and any associated financial compensation may transpire to be insufficient to meet community needs, especially in the absence of wider, lasting community benefits, such as alternative livelihood or income options.
The lack of management and monitoring between HCV assessment and NPP notification: the current NPP process requires growers to conduct an HCV assessment prior to commencing development, but these can be undertaken up to 3 years before the NPP is submitted to the RSPO for approval. Therefore, the total time between HCV assessment and NPP notification may be up to, or just over, 3 years. During this period, companies are prohibited from undertaking any development activities and HCV areas may be vulnerable to encroachment by local communities.

HCV area encroachment prior to NPP notification may be a particular problem if community members view the area as unclaimed or if they perceive the post HCV-assessment period as their final opportunity to salvage any remaining resources (e.g. timber or game) from the area. This latter issue is especially common in degraded landscapes with a history of natural resource use, where forests are too degraded to support traditional livelihood activities and available land is at a premium.

The problem was illustrated by a complaint to the RSPO about IOI and their PT BSS concession in West Kalimantan. This complaint focused on the burning of an HCV area in the period between HCV assessment and NPP approval. During the complaint investigation, IOI claimed not to have had full oversight of on-site activities, as they were yet to establish a physical presence on the ground. They also claimed the fire was started by local communities outside the concession. While the company’s activities may have contributed to the fire (for example, they installed a drain in HCV peat forest that subsequently burned), they did not have a physical presence in the concession at the time.

The interim period between HCV assessment and NPP submission is a grey area which needs to be addressed. At present, there is no procedure for dealing with cases of HCV damage in this period and it is a major limitation of the NPP. It should be noted that the RSPO Remediation and Compensation Procedure only deals with cases where no HCV assessment was conducted prior to land clearance since November 2005. It does not cover cases where HCVs have been damaged after identification.

An additional problem that may arise in the (potentially long) period between HCV assessment and NPP submission is the excision of HCV areas. Although the NPP requires maintenance and/or enhancement of all identified HCVs (RSPO 2015), by re-negotiating concession boundaries prior to NPP submission companies may be able to excise HCV areas and absolve themselves of responsibility for M&M. Excised HCV areas are unlikely to be effectively managed and may be threatened by encroachment by local communities or less-scrupulous companies. This problem has been addressed to some extent by the publication of public summaries of HCV assessments on the ALS and NPP websites, which facilitates the auditing of HCV area maintenance within a concession. However, many HCV areas identified prior to the establishment of the ALS may have been excised. While it is acknowledged that palm oil companies are not conservation organisations, M&M are integral parts of the HCV approach. Furthermore, the RSPO P&C require oil palm plantations to be planned and managed in such a way that HCVs are maintained and enhanced. Excision therefore remains a grey area that needs to be addressed in the 2017 RSPO P&C review.

**Auditing flaws for established concessions (RSPO Criterion 5.2)**

The RSPO has acknowledged weaknesses with its audit processes for certified operations, including the criteria covering HCV requirements. It is recognised that CBs and auditors do not always have the expertise or capacity to effectively audit HCV requirements. The RSPO is working with the HCVRN to improve CB and auditor training to address these gaps. In addition, the forthcoming HCV map layer on GFW, complete with GLAD (encroachment) and VIIRS (fire) alerts, should provide a useful tool for real-time remote monitoring of HCV areas.
EIA and Grassroots (2015) also identified specific weaknesses with auditing of growers’ implementation of NPP plans. They suggested that the RSPO provides insufficient guidance for auditors on how to monitor implementation of management plans in the post-NPP notification phase, leading to variation in the quality of auditing. This problem was deemed particularly problematic for FPIC and community issues, suggesting that management of social HCV areas (HCVs 5 and 6) may be affected. Furthermore, poor oversight of growers’ community engagement and relations may increase the risk of community encroachment into other HCV areas if communities’ needs are not being met. EIA and Grassroots proposed stricter auditing of adherence to plans – including HCV M&M plans – created in partial fulfilment of the NPP.

**Complaints procedure**

EIA and Grassroots (2015) also found fault with the RSPO complaints procedure, arguing that auditors often operate with impunity and suffer no consequences if they hide or fail to detect non-compliance. The report pointed out that the complaints procedure is typically used to raise complaints against companies rather than auditors, and that even if a complaint or investigation finds fault in auditing performance there is no clear process for holding auditors to account.

In practice, the RSPO does hold CBs accountable at an organisational level and has suspended several CBs in recent years. While this does not hold individual auditors to account it does act as a warning to CBs to make sure they monitor their auditors’ performance. It is also worth noting that the RSPO complaints procedure is designed for complaints against any members, so can be used to raise complaints against CBs that are members.
4. Conclusions

4.1. Conclusions from the company survey

All the companies that responded to our survey said they were undertaking some form of M&M. This high reported rate of engagement with M&M may have been partially due to positive selection bias. Nevertheless, it was reassuring that companies claimed to be actively practising HCV M&M in the post-assessment phase, and acknowledged the importance of doing so. However, our survey also identified numerous M&M challenges which may put HCVs at risk of damage or destruction.

We found wide variation in the resources allocated to M&M and the quality of M&M undertaken. Many M&M activities described were generic and potentially unsuited to the specific circumstances found in individual plantations. It was concerning that little mention was made of quantifiable targets or objectives. This suggests that adaptive management is not systematically incorporated into M&M plans. Overall, our findings indicate that M&M plans are unlikely to respond to changing circumstances or show sensitivity to poor practices, meaning ineffective activities are likely to be perpetuated.

Challenges experienced by companies with M&M included technical challenges (including insufficient expertise or experience, and practical implementation challenges), economic challenges (including the high perceived cost of M&M activities and perceived loss of business opportunities), collaboration challenges (including insufficient government support and regulation), and social challenges (community engagement).

Of the four categories of M&M challenges identified, social challenges were the most concerning. Companies perceived the greatest threats to HCVs to come from hunting, logging and encroachment by local communities (excluding in Latin America), yet companies’ self-reported engagement with local communities was inadequate. Few companies were actively engaged in co-management. Furthermore, participants’ responses suggested a lack of understanding of what ‘co-management’ means. In addition, almost no mention was made of M&M for the social HCVs (HCVs 5 and 6). Fortunately, companies did appreciate the importance of engagement with local communities for effective M&M, so efforts to address these issues are likely to be well-received.

4.2. Conclusions from the community survey

The HCV approach is designed to ensure that, where companies invest in lands and forests to produce commodities for discerning markets, key social and environmental values in the landscape are protected. Because HCVs 4, 5 and 6 are locally important, their identification must always be done with the active participation of the local communities that depend on them. Community participation is part of the definition of HCVs 5 and 6, and it is explicitly required by the RSPO P&C for the identification of HCVs. However, the RSPO P&C do not explicitly require community participation in M&M, although it is recommended in the Common Guidance for HCV Management and Monitoring (Brown & Senior 2014).

The findings from the community survey suggest that community participation in HCV identification was absent or token in the study villages, with two exceptions. Most interviewees claimed that they knew little or nothing about HCVs and could not identify any HCVs or HCV management areas in their areas. This suggests that more needs to be done in these cases to ensure HCV assessors observe minimum standards. The proper implementation of HCVRN guidance, as required by the
ALS, should help to address these issues in HCV assessments undertaken for new plantings under the NPP after January 2015. Nevertheless, additional guidance on M&M is needed by companies.

In agreement with our findings from the company survey, community involvement in M&M was found to be deficient. In only one of the company operations reviewed had community members participated in M&M teams. In this case, we found variable comprehension among the community members of what the HCV approach is. Even the community which seemed most experienced in M&M said they needed more training in order to be effective.

The community interviews suggested that the overall quality of company engagement with local communities needs to be improved.

4.3. Summary and next steps

This study surveyed some of the attitudes, perceptions and experiences of HCV M&M among oil palm companies in Latin America, Southeast Asia and West Africa, and communities living on or near oil palm plantations in Indonesia. The surveys were analysed and interpreted with reference to the existing literature on M&M. Consequently, this study has revealed common M&M practices and identified perceived M&M challenges as reported by company and community representatives. Based on these reports, some potential pathways to best-management practices (BMPs) and some potential solutions to identified challenges have been proposed in Section 5.

Reports from company and community representatives are, however, necessarily subjective and prone to bias. Furthermore, as the sample size in this study was small, it cannot be assumed that our findings are representative of all sustainable palm oil production – although our findings are indicative of the state of play. More work is needed to field-truth the claims made by participants in this study and investigate the effectiveness of M&M activities in the field. Only once effective M&M practices have been assessed in the field will it be possible to authoritatively identify BMPs and develop appropriately-informed guidance.
5. Recommendations to improve HCV management and monitoring

5.1. Raise awareness of existing resources

Several resources exist which provide guidance on M&M but many growers may not be aware of them. For example, the HCVRN has published Common Guidance for HCV Management and Monitoring (Brown & Senior 2014). This includes important guidance on some of the core components of M&M, such as how to develop M&M plans; how to implement M&M plans; and examples and case studies of commonly-used M&M techniques.

The RSPO and the HCVRN should communicate the availability of this guidance to HCV assessors and growers at training events and conferences. Other materials which may also be recommended include the collection of case studies by Paoli et al. (2014). The RSPO could also consider developing new tools, such as a module on community engagement in M&M for its online ‘Sustainability College’.

Companies should support their HCV managers by providing training on using the available guidance. Companies should also use guidance to inform their SOPs, particularly with respect to adopting an adaptive approach to M&M that is responsive to changing conditions and experience.

5.2. Pathway to developing Best Management Practices (BMPs)

In order to develop BMPs, it is necessary to objectively assess the effectiveness of different M&M approaches and activities in the field. However, based on the attitudes, perspectives and experiences surveyed in this study, and the results of the literature review, we would propose the following steps as a pathway to developing BMPs and, ultimately, raising the standard of M&M.

**Technical challenges**

HCV assessments inform subsequent M&M plans and if an assessment is poor, the M&M plan is also likely to be lacking. In both the company and community surveys, variability in the quality of M&M activities suggested that some of the underlying HCV assessments may have been of poor quality. This was particularly evident in cases where HCV assessments were known not to have undergone ALS quality control, such as those represented in the community survey. The RSPO should continue to support the use of ALS-licensed HCV assessors and ALS quality control as part of its NPP requirements. This will help to ensure that minimum standards for HCV assessments are enforced and M&M activities can get off to a good start in new plantings. For established plantings, RSPO CBs and auditors should ensure that HCVRN guidelines for HCV assessments are followed, such as the Common Guidance for Identification of HCVs (Brown et al. 2013) and the HCV Assessment Manual (HCV Resource Network 2014). Requiring the use of the ALS for HCV assessments in established plantings could help provide a platform for better M&M in this context, but doing so would be a potentially controversial step that would require majority approval by the RSPO membership.

The RSPO should also consider requiring the involvement of licensed HCV assessors in the development of M&M plans to ensure they adequately reflect the recommendations of HCV assessment reports. The HCVRN should continue to support the development of technical competence among HCV assessors through delivery of its assessor training syllabus. The importance of stakeholder participation in HCV identification (including community participation, where communities are found in or around the development) should always be emphasised, as should the
importance of providing clear recommendations for M&M. Provision of specific M&M training should also be considered for key stakeholders, including plantation-level HCV managers.

**Improved knowledge sharing and exchange between companies** may help leading companies to share their approaches with other growers and advise them on effective M&M strategies. This could be done by developing structured learning networks and large-scale training programmes for growers (KADIN & IBCSD 2014), as well as mentoring for company HCV staff by staff from other leading companies. This would help growers to overcome the challenges associated with the novelty of managing HCVs in active plantation landscapes. Adaptive management should always be emphasised and training could be provided on using monitoring to adapt management plans.

The lack of sectoral experience in M&M could also be addressed by the RSPO, potentially with support from the HCVRN, opening communication channels with universities to develop courses for plantation managers on practical conservation management in oil palm landscapes (Paoli et al. 2014). This could take advantage of existing partnerships between RSPO growers and universities to facilitate field visits and even mentoring programmes.

**Creating standardised templates for HCV management and monitoring** may raise awareness of the key components of M&M plans, including adaptive management, and thereby help companies to develop their own plans. It may even be possible to create templates for setting HCV management targets or monitoring indicators (Paoli et al. 2014), but these must be tailored to the local context. This approach has already been applied to forestry in Cameroon (Dainou et al. 2016).

Monitoring indicators are sources of information which can be used to assess whether HCVs are being maintained and whether management activities are effective (Brown & Senior 2014). Indicators should be Specific, Measurable, Attainable, Realistic and Time-bound (SMART), and meet the following requirements:

- Specific (e.g. related to specific species) and direct, if possible (direct indicators, such as population counts, provide more detail but they are not always possible; indirect indicators such as measuring density of traps or hunting camps may be more realistic in some cases)
- Quantitative and easily measurable on an annual basis (linked to the audit schedule)
- Use thresholds wherever possible; if not, use trends
- Relative (where possible) to allow comparison between management units, e.g. the proportion of communities or staff members involved in awareness-raising activities.

Companies could also be **supported with prioritising M&M activities** through the provision of guidance on how to use HCV assessment reports to develop M&M plans. In the past, assessment reports often provided long lists of identified HCVs, which may have caused confusion over which M&M activities were most important. This could have contributed to the homogeneity of M&M activities seen in the present study. Companies may therefore benefit from specific guidance on how to use assessment report recommendations and set M&M priorities.

Finally, **the RSPO should consider adopting measures to ensure that companies are using the outputs of their monitoring activities to adapt their management plans.** For example, auditors could be required to check that management plans are updated at least once annually using the outputs of SMART monitoring indicators.
**Economic challenges**

Our study found that companies perceive M&M as expensive and the business benefits of the HCV approach are not always appreciated. This can make it difficult for staff responsible for implementing M&M plans to ensure that they are properly resourced.

Companies should minimise the costs of M&M ensuring that management plans are as efficient as possible. This means ensuring that monitoring outputs are used appropriately and practising adaptive management (see above).

**Improved efforts should be made to communicate the commercial benefits of the HCV approach.** For example, according to Supply-Change.org, over 245 global companies (most of which are downstream supply chain actors) have committed to protecting HCVs. Only by ensuring the maintenance and enhancement of HCVs, therefore, can growers guarantee access to this customer base. The RSPO and HCVRN may consider using targeted communications to raise awareness of this and other facts about the business benefits of HCV M&M.

It is also noteworthy that, while 62% of companies assessed on ZSL’s Sustainable Palm Oil Transparency Toolkit (SPOTT) have public commitments to undertaking HCV assessments prior to any new planting, only 4% make their M&M plans publicly available for all of their estates. Improved disclosure of M&M plans could improve transparency and accountability, as well as giving investors and downstream companies confidence that companies are implementing their commitments.

**Collaboration challenges**

A lack of government support and insufficient regulation were cited as key challenges for M&M, particularly by Indonesian participants. A process is now underway to incorporate the HCV approach into Indonesian law. The RSPO and the HCVRN must engage with the Indonesian legislative process and the HCV Network Indonesia to ensure that any new HCV legislation uses the HCV definitions appropriately and without alteration or revision that may reduce their scope. This will ensure that HCVs receive effective legal protection. The inclusion of all three stages of the HCV approach – including M&M – should be advocated for any new legislation.

Careful attention should also be paid to the development or revision of legislation in Latin America, where conservation activities are a legal requirement of palm oil producers in many countries, and in West Africa, where the recently-announced Marrakesh Declaration on Sustainable Development of the Oil Palm Sector in Africa has been signed by seven countries. Appropriate engagement with government processes should be sought in these regions to ensure that HCV protection is adequately accommodated in any new or revised legislation, conventions or agreements.

Individual companies’ M&M efforts may also benefit from a greater focus on landscape-level, joint management of HCVs between neighbouring concessions. Landscape-level approaches have been initiated in regions including Riau and South Sumatra, although not normally with RSPO certification. Such initiatives should also be promoted in Latin America and West Africa. The RSPO should recognise the achievements of companies engaging in landscape-level collaboration and consider placing stricter requirements on growers to strengthen ecosystem connectivity in plantations going into second rotations (for example, requirements to reforest riparian corridors).

Existing RSPO manuals on BMPs for peat should also be promoted palm oil producers operating on peat to develop a landscape management plan and demonstrate collaboration with other landscape actors (government, communities, other companies) and CSOs. As an additional step, the RSPO could require companies to block canals and rewet peat, potentially at the end of crop rotations.
This may seem demanding, but it is in line with new Indonesian legislation and the recommendations of the Peatland Restoration Agency (BRG). The debate on peatland management and oil palm production is progressing quickly, so the RSPO should be wary of being left behind as sectoral expectations shift.

**Social challenges**

The company survey revealed poor levels of engagement and co-management with local communities. This finding was supported by the community survey. Where local communities live in or around oil palm plantations, companies with responsibility for those plantations must make greater efforts to actively involve the communities in land-use planning, HCV management area delineation and co-management. The RSPO could consider making stricter requirements for community engagement in management and monitoring through its P&C.

Encroachment, hunting and burning by local communities were identified as key threats to the maintenance and enhancement of HCVs. These threats may be managed by preventing access to HCV areas with stronger enforcement and monitoring, but this does not address the causes of the prohibited activities. Addressing indirect drivers of these behaviours is likely to be more effective but also requires more time and resources. Other possible solutions include (Colchester et al. 2011; KADIN & IBCSD 2014):

1. Greater scrutiny of growers’ efforts to identify customary lands and secure livelihoods in the HCV assessment phase;
2. Development and refinement of best-practice models for company-community co-management; and
3. Requirement for companies to work with communities to develop detailed management plans that ensure community needs are met. Ideally, this should be done at the start of development, but it can still be beneficial even after concessions are established. Such plans should also be reviewed regularly as social impacts change over time.

While the first of these possible solutions can be reinforced through the ALS (in the case of new plantings), the second and third solutions may be achieved through the development of new guidance for companies. This should be based on an objective assessment of community engagement best-practices made through field observations.

Other recommendations to support better community engagement derived from the community survey include:

- Communicating the minimum requirements for community participation in identification as set by the HCVRN; and communicating the minimum requirements for evidence that communities have been involved in (and given FPIC for) M&M plans;
- Conducting randomised field checks of HCV assessments, in coordination with the HCVRN, to promote an improvement in the quality of participation in assessments in both new and existing plantations; and
- Developing guidelines to set out the options for community involvement in M&M.

Emphasis should be placed on enhancing the benefits for communities of maintaining or enhancing HCVs or, where there are costs, compensating communities for any restrictions on livelihoods.

**Enforcement challenges**

Two enforcement challenges were identified from the literature: the management vacuum between baseline assessments and NPP approval; and flaws with auditing of NPP implementation once concessions are established.
The RSPO could address the absence of M&M in the period between the HCV assessment and NPP notification by requiring growers to maintain HCVs from the time they are identified and by permitting companies to establish measures necessary for management of HCVs prior to plantation development. For example, companies could be permitted to build fire towers and deploy field teams to establish low-impact bases from which to lead HCV patrols on the ground. These measures could also include initiating wider co-management options where possible, such as engaging with communities in the neighbouring landscape to establish community-based fire patrol units.

The RSPO should also provide improved guidance and training for auditors on how to audit HCV management effectiveness, for example, by requiring the use of GIS tools to assess whether HCV areas remain intact. This could be supplemented by requiring auditors to attend refresher training on critical topics, e.g. HCVs and community relations. The RSPO is currently exploring opportunities for HCV training for CBs and auditors with the HCVRN.

Plans to map HCV areas from NPPs on Global Forest Watch (GFW) are also underway. This will facilitate HCV monitoring through the use of GFW’s GLAD (encroachment) and VIIRS (fire) alerts. The RSPO should require CBs and auditors to use these maps to monitor HCV areas and should develop guidance on how to respond to encroachment or fire alerts appropriately.

6. Acknowledgements

Daemeter Consulting, FPP, HCVRN, Proforest and ZSL would like to thank all of the participating companies for taking part in the company survey. We would also like to thank our partners and the communities in South Sumatra and West Kalimantan for their assistance with and participation in the community survey.

Thanks also go to our collaborators from University of Hawaii, University of York and University of California, Santa Barbara, who provided assistance with the GIS analysis in Box 1.

Finally, all the project partners would like to thank the RSPO and the RSPO BHCVWG for providing funding for this work.
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