Using Technology and Data to Enable and Enhance Remote Audits

January 2021

Introduction

As assurance and oversight practices have been forced to adapt to continue operating during the COVID-19 pandemic, an important consideration has been how to integrate technology and new data sources to make remote audits possible and to strengthen the reliability and effectiveness of those assessments.

This guide supports sustainability systems and their assurance partners to make decisions about when remote auditing practices are appropriate and desirable, and how to use new technology and data to both inform and then operationalize that choice. Based on combination of desk research and interviews with sustainability auditing professionals across both standard schemes and certification bodies, this guide does not advocate for the use of specific technology. Instead it aims to give practical advice based on experiences to date, both on the types of tools and data sources available, as well as some key considerations for successful integration of remote audit technology into assurance processes.

This guide is divided into four sections that mirror the steps that a sustainability system or assurance provider will have to take if remote auditing practices are to be integrated into assurance protocols:

1) Determining eligibility for a remote audit

2) Pre-audit planning and data collection

3) Conducting the audit and choice of support tools

4) Oversight

Step 1 – Determining eligibility for a remote audit

As sustainability systems become more methodical about the introduction of remote auditing practices, a decision tree can help to determine when and to what extent remote auditing is appropriate and perhaps even preferable. The basic sequence of decisions that need to be made are as follows:

- Is the remote audit feasible?

- Is remote auditing an acceptable solution?

- What type of remote assessment process is suitable?

Is the Remote Audit Feasible?

Whether it is potentially the only option available due to extreme events or is a type of audit already considered as part of the assurance system, there are a range of factors informing whether remote audits are feasible. These can be divided broadly into factors related to the health and safety risks of carrying out an on-site assessment, the structure of the sustainability standard, and the operational context of the certifying entity.

Health and Safety

If remote auditing is not part of the assurance system, but there is a need to consider it due to a crisis situation, the first step is to assess the health and safety risk to the audit team of carrying out the audit on-site. This is particularly relevant during the pandemic but applies equally to extreme conditions like civil unrest or natural disasters.

Most sustainability systems already have in place a *force majeure* policy that covers situations where on-site audits cannot be completed. At minimum it will be important to review and potentially revise these policies to include the steps taken to assess the country or regional travel restrictions in place and implications for the health and well-being of the auditor or assessment team in the face of the pandemic. This should result in a checklist of factors, the presence of any one of which would preclude an on-site audit and trigger remote auditing practices. For a good example of how to construct such a checklist, please see Preferred by Nature's policy on COVID auditing.

Structure of the sustainability standard

Not all criteria in a standard can usually be assessed remotely. For example, social criteria such as health and safety or presence of child labour may require on-site assessment and in-person worker interviews. A first exercise for each sustainability system therefore is to review whether each criterion in their standard could be assessed remotely, e.g. through provision of documents, data feeds, or use of technology. It might also be worth investigating whether a hybrid approach, where only some of the criteria are evaluated remotely, could be possible. Documentation of which criteria can be assessed remotely and what evidence of compliance is required will also be invaluable as guidance to auditors in carrying out assessments.

Understanding operational contexts of clients

As with the structure of the sustainability standard and assurance process, not all clients lend themselves equally well to remote audits. Differences in geographic contexts, types of clients (small-holders vs big companies), access to internet, and technology competence have implications and introduce limitations around whether remote auditing is practically possible. Assessing whether the basic infrastructure and capacity is in place to be able to conduct remote audits across the range of certified entities under review will be a necessary step in the initial feasibility assessment.

Is remote auditing an acceptable solution?

Assuming all three of the previous considerations reveal that a partial or full remote audit is feasible, it is still necessary to consider whether the level of risk presented by the client or the context in which they operate would preclude a remote audit. In other words, are the risks of non-compliance for certain issues, so high that the scheme owner or assurance provider would not feel secure that a remote assessment would reach an accurate decision on compliance? Depending on the nature and levels of risk each sustainability system manages as part of their scheme, remote auditing may not be an acceptable solution.

To answer this question requires that sufficient information is collected about the client and their operating context to determine the level and types of risk which need to be factored into an audit. Creating a more informed picture of risk and moving towards risk-based decision-making starts by building up a rudimentary risk profile of the client. These risk profiles can use both internal data and external data sets, indices (see Annex 1), and geospatial data layers such as on deforestation or protected areas but will also be helped by drawing on institutional knowledge and other non-digital sources of information. Information that can inform risk profiles can include:

- Country/region/product-specific risks

- Number and severity of prior non-conformities, particularly the most critical social, environmental and economic requirements

- Complexity of operations or supply chains

- Numbers of sites, workers or subcontractors

- Known changes to structure, scope or operations

- Stakeholder feedback

- Allegations/complaints and known issues in the public domain (NGO reports, media articles)

Where a client presents a high risk of non-compliance, this does not necessarily preclude a remote audit but it should trigger an assessment of whether additional measures are needed to assure compliance or whether the client only qualifies for some sort of conditional certification, followed by a mandatory site visit at a later date.

The responsibility for who will initiate and maintain risk profiles can vary. Sustainability systems may want to prescribe criteria and provide tools to assurance providers to conduct regular assessments and even share data that can feed into it. However, scheme owners may also assign some responsibility to their clients to encourage continual improvement.

It is worth noting that no organization has stated that these external sources of data, combined with internal data or otherwise, has the ability to completely replace the efficacy of information produced during the audit. But they can be a very useful tool in helping to guide decision making on the eligibility of remote auditing or perhaps even where it will be the preferred choice, based on the level and types of risks presented by the client. Going even further, better use of data can even lead to some efficiency gains, by e.g. helping to pinpoint areas where extra scrutiny is needed during the audit and focussing audit time where it is most needed.

For a practical guide on how to combine multiple sources of data to aid in decision-making, with a particular focus on data driven risk assessments, please see the ISEAL guidance on Unlocking the value of your data: A practical guide for sustainability systems to turn data into actionable insights.

What type of remote assessment process is suitable?

In situations where remote audits remain an option to cover all or some of the criteria of a standard, the scheme owner still needs to determine the nature and extent of the remote assessment. Options include:

1) Off-site desk-based audits. This will typically involve document sharing and review and no virtual interaction with the site (unless combined with other options below). In almost all cases of remote auditing, the audit team will incorporate greater scrutiny of client documentation in advance of any virtual engagement.

2) Virtual/remote audits. This will involve some form of virtual interaction with the site in question, e.g. remote interviews or site tour, in combination with a review of client documents and other sources of data and information.

3) Hybrid audits. (Also known as partial, facilitated or semi-remote audits) An evolution of the remote audit, this involves combining a desk based audit with the use of a local facilitator or audit team members to help virtual lead auditors verify practices on the ground. These can still be supplemented with a full on-site audit within a determined timeframe.

The conditions for selecting the type of remote audit will vary between system needs and capacities. For example, you may choose to do a hybrid audit when not all of the audit team can go on-site, providing greater flexibility to assurance providers. A full remote audit may be an option where the audit objectives can be achieved remotely, such as in a surveillance audit where all the requirements can be assessed through documentation review, online interviews and where the client does not represent a high risk of non-compliance. Where scheme requirements exist that cannot be adequately assessed through any remote approach, partial audits covering the remainder of the standard, followed by mandatory site visits at a later date and awarding only conditional compliance status, can also be an option.

In developing your new procedures, it is important to consider the interplay and dependencies between on-site and remote audits. Therefore, ensure that e.g. timelines between remote and follow up audits and scope of criteria covered at the different audit types are clear.
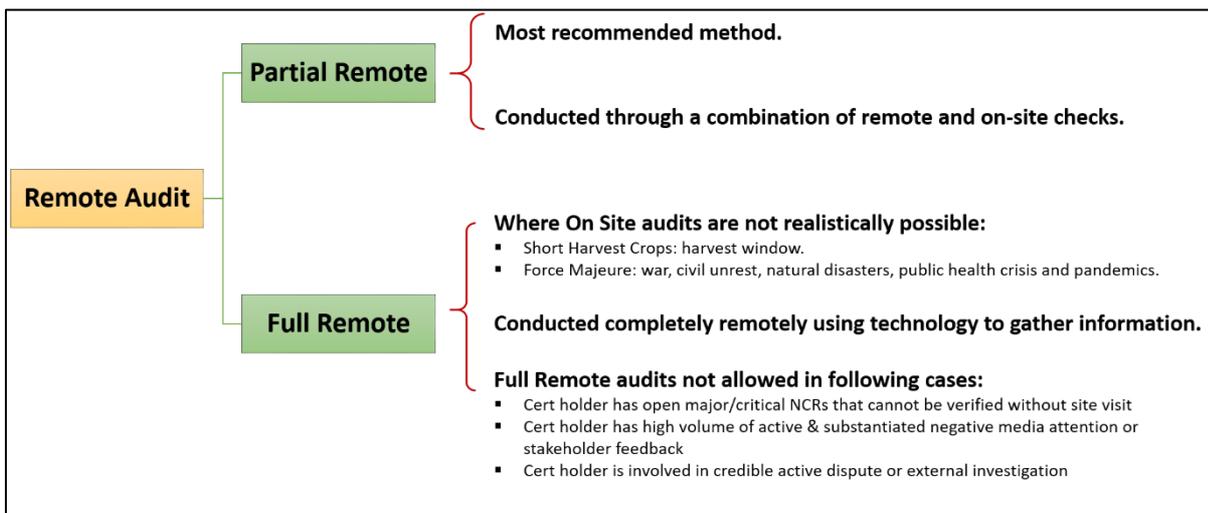

Figure 1: Example of decision tree used to determine what type of remote audit should be implemented (From Preferred by Nature)

Making an informed choice on the types of verification needed is critical, as this will then determine the technology, data and audit team needed to execute the audit.

Additional tips to make Step 1 successful.

Collaboration is key - In developing new policies and protocols, collaboration between parties involved in the remote audit, i.e. standard setters, assurance providers and clients, will be key. This includes reviewing scheme requirements, sharing data and information, looking at choice of technology and more. Regular feedback between on-the-ground implementation and policy development is essential if we are to keep our assurance systems operational, safe and as credible as possible.

Step 2- Pre-audit planning

Once the choice on which type of remote audit to use has been made, the next step is to plan for the audit to be carried out. This involves preparing the right team, preparing the client, and gathering information from them. Preparations should also include consideration of which technology to use during the audit and identifying any data sources that can be useful to help plan and further inform the audit.
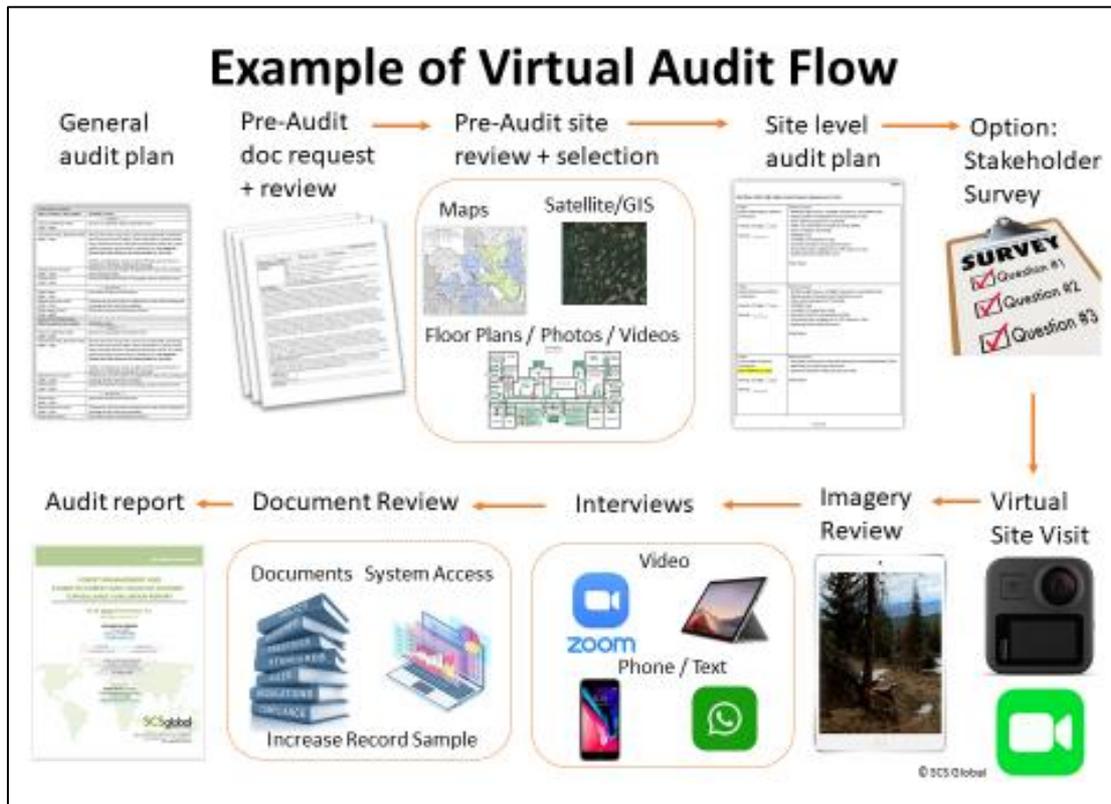

Figure 2: Example of a virtual audit flow and planning process (From SCS Global Services)

The above flowchart gives a generic overview of the main steps involved in conducting a remote audit. The pre-audit planning and data gathering steps are considered in this section, while the steps in conducting the remote audit are considered in the next section. The steps in the process may vary depending on the type of remote audit conducted.

Preparing the audit team and assurance staff

Doing remote audits well entails a different skill set than traditional on-site audits. This means that audit team composition and skill sets may need to be adjusted in team composition requirements and assurance protocols.

In the case of hybrid audits, it is becoming clear that using local facilitators can be crucial to the success of these types of audits. Scheme owners should look at team composition requirements to see if this is allowed within the assurance system and adjust procedures accordingly. A local facilitator may not always be needed, but conducting remote audits, especially during crisis situations, does require a degree of flexibility that could be curtailed by more traditional assurance procedures.

Personnel across the audit spectrum, including scheme owners, oversight bodies, assurance providers, and locally employed staff on the ground, such as facilitators, will all likely need training to get familiar with new

ways of working in remote settings. Scheme owners should implement training programmes or require training of relevant personnel in remote auditing procedures and practices. Training will need to cover which requirements are covered remotely and the specific remote audit methodologies to carry out; likewise the role and specific activities for any facilitator. Training programs may even benefit from coordination across schemes as many entities are certified to multiple schemes. For example, one locally employed facilitator could facilitate audits against several standards, providing that they are trained across scheme requirements.

Preparing the client and provision of client documentation

For any type of remote audit, advance document review of materials from the client will form an essential first part of the audit. In the pre-audit planning stage, be as specific as possible with the client on what documentation needs to be provided. Building out a standardised list of the required documentation can increase consistency and clarity of approach.

At a minimum, auditors should request the same list of documents that they would require to conduct an on-site assessment. Additionally, based on the criteria that can be assessed virtually, they should identify what documents or data are needed to support that assessment. Documents should be requested well in advance of the audit so that requests for additional or outstanding information can be followed up in advance of the audit.

In addition, ensure that the tools and approach used works for the people being audited and is well explained from the on-set. Setting up timelines for remote audit steps will be central to aligning expectations on the process, i.e. what to expect and when to expect it.

Data and information to support audit planning and efficiency

Information that will inform audit planning will not only include client documentation. Additional data sources that are useful to collect and review include:

- Previous audit reports and corrective action plans.

- Any specific data sets to tell you more about the site and its surrounding environment (GIS data, site plans, satellite images)

- Looking at external data sets to cross-reference information from clients (e.g. Table 1).

- Worker lists, including demographic information if remote worker interviews are required.

- Stakeholder consultation and feedback, including complaints or grievances

Data confidentiality and secure sharing

For all data acquired before or during the audit, it is necessary to ensure that rights to access and use of data are secured. These should be part of the procedures and agreements between assurance providers, clients and scheme owners. If this is not in place, interim Data Sharing Agreements (DSA's) produced solely for the purpose of the audit, should be signed by the parties ahead of audit. Please see ISEAL's guidance on Structuring data sharing and licensing agreements for more information (ISEAL login required).

When it comes to sharing of documents, data and other materials ahead of or during an audit, the security of storage will likely come up. Many systems have dedicated platform solutions for this already, but certified clients or small-holder groups may not be part of those platforms. As a result, you may need to acquire documents from individuals that have never shared this information with you in a digital format before. Given

the often confidential and sensitive nature of these documents, it is important to find secure solutions that clients or other parties can feel comfortable using. It is up to your organization to do an evaluation on security of different options and determine what is best-suited to your needs and the needs of your certified partners.

Cloud storage options, including the likes of Dropbox, Sharepoint, and Google Drive, provide good options for secure and easy data sharing. They all enable different levels of access to documents and have an easy interface for sharing files in real-time. However, they are dependent on the client having an internet connection and the ability to upload large files. Additional considerations when using these tools include:

- Obtain written permission from the auditee on the software to be used, ahead of the audit.
- Ensure the software has enough storage space to handle large files.
- Check that your data sharing and security protocols are GDPR-compliant and restrict access to essential personnel.

Stakeholder engagement

Meaningful stakeholder engagement is a crucial part of audit preparation, regardless if the audit is on-site or remote. Reaching key stakeholders and local and indigenous communities was already a concern pre-COVID as there is a risk that these stakeholders will be under-represented. Auditors should allow more time in the planning process to account for stakeholder consultation, including with indigenous peoples and workers.

Good practice is to communicate with stakeholders one month before the audit. Consider sending an email and following up with a telephone call. As some stakeholders do not have access to laptops, mobile phones or other technology, other solutions include collaborating with local NGOs or charities to hear from stakeholders who don't have the capacity to engage directly.

Additional tips to make step 2 successful.

Embrace flexibility – Which tools and solutions work best, will vary depending on the context in which they are used. You will not likely find one-size-fits-all solutions here, so be prepared to adjust plans and expectations on the fly. For example, assurance providers may find during the pre-audit stage that platforms chosen for video-conferencing do not work for a particular client. From an assurance provider perspective, it will be beneficial to have a suite of options available for clients that they can tailor to different situations as they arise. Scheme owners will therefore need to balance giving assurance providers that flexibility to adjust plans and solve problems, whilst not compromising on audit quality or consistency. Closer collaboration and feedback loops between assurance providers and scheme owners will be very useful in this regard.

Time commitment – The work in planning and decision-making ahead of the audit is good practice but demands a higher time commitment than regular audits. Introducing new ways of working during the pandemic has also made it very hard to quantify the amount of time expected to be spent on an audit. For instance, during regular site visits in non-pandemic times, you could hold group worker interviews. But now this is impossible and interviews have to be done individually instead. More flexibility in terms of time expectations should be factored into audit planning.

Step 3- Conducting the audit and choice of support tools

With a remote audit, technically the audit process starts with the desk-based review of documentation provided by the client. Once that initial assessment has been completed, the main focus of the remote audit itself, is the virtual communication with the client, workers, and stakeholders to gather additional evidence.

Remote audits should start with an opening meeting in the same way as an on-site audit. Use this opportunity to explain the agenda, objectives and any specific needs around the use of technology or accessibility to documents or information. You should identify all participants in this virtual meeting and not rely on the names appearing in the list of participants as people may use other user accounts. If you are the host, you can control access to who is able to join the meeting.

Video conferencing calls

Use case	Technology options	Benefits	Limitations
Replace face to face interviews with various staff	Various tools are available Skype, Zoom, Microsoft Teams, Whatsapp, GoToMeeting, Google Meet, etc.	Several choices of platforms available to suit most preferences globally. Widely used and easy to understand.	Do not make assumptions that everyone will be comfortable being interviewed in this manner. It may be suitable for site managers but not for workers. It is difficult to ensure privacy of individuals giving interviews, e.g. is the call being monitored off-camera? Difficult to access all needed key personnel through video interviews alone.

Considerations for use

- Check the geographical context, bandwidth and connectivity with the client and agree on the software to be used.

- Schedule a test call in advance to test the selected platform.

- Webcams should be used where possible to provide a personal touch and read body language.

- Use a headset to increase audio quality.

- Identify all participants in the meeting and control access.

- Factor in regular breaks to avoid fatigue and check in with the auditee if they need a break.

- Do not take any screen shots or record calls without permission from the client.

- Make best efforts to paraphrase and confirm what was heard or said.

- An organizational chart can be used to ensure all necessary key personas are sampled/interviewed.

Making the right choice of which video conferencing tool to use may depend less on your preferences and more on what works best for the client. This will depend on which platform they have access to, geographical context,

bandwidth, and connectivity. There is a chance that cultural contexts and remoteness of location will also play a factor here and you should not assume that everyone will have the same comfort level of being on camera as you do. Rather than being prescriptive on which tool to use, you can be more prescriptive on the conditions and expectations of the call.

Related to this, it can be worth considering whether interviews should be recorded and if so when and how often. Recordings can be played back for purposes of oversight by scheme owners or shadowing an audit by oversight bodies. However, if this is put into assurance protocols, you should consider data rights implications, as the interviewee may not be comfortable with recording or may be less open to sharing information. There is also the question of where and how long to store this information. An organisation may end up with several Terabytes of data of video recordings that may never be looked at.

If there is a breakdown in connectivity, be flexible and focus on what you can do and be prepared to move on; you can revisit something or resume an interview at another time during the audit. Schedule regular breaks and be clear on their duration, setting a time for when all participants should resume the audit.

The closing meeting can operate in the same way as the opening meeting. Be clear if there were technical problems that prevented accessibility to documents or disruption to interviews.

Using local facilitators

Using local facilitators can be crucial if some on-site presence is required to support auditors in planning and conducting the audit, such as during hybrid audits. Local facilitators can be used when the auditor is unable to go on-site or when there are technology issues such as remote areas with no internet coverage. Regardless of the technology used, these local staff on the ground, working under instruction of the assurance provider, can provide crucial support by coordinating interviews, filming facilities and more.

Here are some considerations when using local facilitators:

- Identify the language and competency requirements. Facilitators should speak the local language, as well as the audit language, and be aware of local customs. They should demonstrate some experience in performing audits and be familiar or have experience with the technology to be used.

- Impartiality of facilitator needs to be ensured, including checking that there is no conflict of interest with the clients or facilities they are helping to inspect.

- Facilitators will be in constant contact with the lead auditor throughout any audit-day activities in order to be effectively guided.

- Provide training to the facilitators to ensure they understand their role in the audit process, specifically that they are to assist the auditor but not interfere with the audit itself. For example, facilitators should not lead interviews but act on the direction of the lead auditor.

- Prepare facilitators in advance of the audit by providing necessary information and ensure they have access to the required technology.

Conducting worker interviews

The efficacy of conducting effective worker interviews remotely is currently debatable. The main concern is that it may introduce increased risk for the workers, due to the lack of control over the interview process and introducing a process that lends itself to coaching and threats of retaliation for workers. Without a physical presence, building needed trust and rapport with the workers will also be difficult. Some scheme owners may

choose not to require remote worker interviews and instead follow-up on worker feedback gathered from worker voice tools or surveys sent in advance of the audit (see below). Either way, it is necessary to provide some guidelines that auditors should follow to ensure consistency and credibility of the process. If conducting worker interviews remotely, it is important to consider:

- How the workers have been selected - they should be selected by the auditor not the auditee.

- Accessibility of the technology – are you connecting to personal mobile phones or a shared computer?

- Consent – don't record the interview or take pictures unless strictly necessary and you have consent from the interviewee.

- The environment – is the interview in a comfortable and confidential space? Management staff should not be present.

- Is the environment close to their actual work site? It is better to refrain from having workers being transported for interviews (e.g. brought from a farm to an office 30 minutes away, during which time they may not be paid).

- Gender – if the auditor is male, consider auditing females in groups. Establishing trust in a remote environment is critical.

- Language – if multiple languages are spoken, the auditor should select an independent translator to join on-site or remotely.

- Technology – the same pre-audit technology checks should be applied.

Additional Technology Options during the Audit

Video footage/Photos

Use case	Technology options	Benefits	Limitations
Gives auditors snapshot in time view of audit site.	Smartphone with network access. Camera (minimum 8 megapixels) Smart glasses (Google Glass, Microsoft Hololens) Other useful resources: Directional microphone; Headphones; Data card; Batteries and chargers	Serves as best reasonable option to introduce observation methodologies during crisis or unusual circumstances (better than no observation) Smartphone technology is cheap and widely available. Smartphones will usually have enough resolution in cameras to provide video or photos of	The person holding the camera needs to be verified and likely trained by the auditor/CB. Limitations to video/photo capture in terms of areas that can be covered. It does not replace being on-site as one cannot get the same audio-visual-sensory experience.

		sufficient quality to be useful for an auditor. Higher resolution options and 360 cameras also available.	

Considerations for use

- Determine whose technology is to be used (e.g. whose smartphone) and test the quality of the tech in advance.

- If tech is to be shipped to the client or local facilitator to use, account for the time required to do so in advance of the audit.

- Use a local facilitator to gather photos or video footage if the lead auditor cannot be physically on-site.

- Request a detailed site map, including additional sites or external areas.

- Obtain written permission from the client to gather video footage or images on-site.

- Check if all areas of the site can be visited using equipment. Some production areas may not allow cameras or other equipment to be on the factory floor.

Consider who is holding the camera or smartphone. If an auditor or a member of the audit team cannot be there physically to support video capture, then a local facilitator could be used. If even facilitator's are not available, client facilitated video capture could be acceptable, but guidance needs to be available to support this. Whoever the individual, consider the competency, impartiality and conflict of interest for that individual. They need to work under guidance of the auditor and be willing to show all pertinent parts of any site as instructed by the auditor.

Drones

Use cases	Benefits	Limitations
Can either provide remotely sensed imagery or track GPS to record location data. Usually operated and owned by the certified entity. Images can provide view over time, if they regularly use drones to survey their property. Can also be used as a point in time exercise, if instructed by the audit	Best where boundaries are very long, too far to walk, terrain/access is challenging, and there is a lot of cover (e.g. large forest units). Can be used to quickly observe areas not easily accessible by humans and check presence of e.g. deforestation. Can provide more up-to-date and higher resolution	Can be challenging or impossible to operate in sub-optimal conditions. Require skill and training to use correctly. In order to generate accurate and precise data, a trained drone pilot is needed. Higher implementation costs. Drones are not particularly expensive, but their implementation (at this point in time) can be. Logistics, transportation and training are all costs that need to be considered. Legal ambiguity. Legislation has not caught up with the proliferation of drones. In some jurisdictions, legal grey areas exist around their

team to capture images for purpose of the audit.	imagery than perhaps satellite images or other generated maps.	use, and concerns have been raised about privacy infringement.

Additional Technology Options Outside of the Audit

There are a number of additional technologies that enable data collection outside of the formal assessment process and which can be used by auditors to supplement the data collected during the audit. These include recorded camera or video footage of the facility and the use of worker voice tools that enable workers to share perspectives informally or anonymously.

Permanently installed cameras

Use case	Technology options	Benefits	Limitations
Continual surveillance of operations.	Surveillance cameras already installed on-site by the client. Sensors gathering specific types of data. Wearable devices to track workers.	Can already be a wealth of footage available to be used as part of audit evidence.	Analytical time can be high. Reviewing several 100hrs of footage is likely not feasible. Will likely require AI solution to scan images. Legal ambiguity. It would need to be checked beforehand whether information can be used for purposes of an audit.

Considerations for use

Sensors, cameras, and wearable devices can provide important information on temperature, toxins, or rights abuses in the workplace, but can also lead to non-stop worker surveillance and serve business process optimization at the expense of worker well-being. This can include punishing low performing workers, monitoring bathroom breaks, or discriminating against those with conditions impacting their work outputs, including pregnant women and the disabled.

Worker Voice tools

The term 'worker voice tools' refers to a suite of digital worker reporting platforms designed to obtain information directly from workers in order to generate data on working conditions. The most common form of these tools are worker surveys by automated calling or texting to workers on their mobile devices and seeking their answers to a limited number of questions about working conditions. Several of the existing digital platforms also offer ongoing two-way communication channels, for instance allowing employers to inform workers of critical information on safety or project updates or enabling workers to register grievances. Many platforms are now dropping the term 'worker voice' (because it implies a passive role) preferring instead 'worker-engagement supported by technology'. Most tools will work through a mobile phone, which does not

need to be a smartphone. For further guidance on application of worker voice technology, please see this summary of tools and recommended uses by Proforest.

Use cases	Technology	Benefits	Limitations
Pre-audit risk-assessment- Where individual or group worker interviews cannot be conducted remotely or to interview a large number of workers or workers across multiple sites. Supplement the remote or on-site audit.	Worker voice tool providers such as Ulula, &Wider, Laborlink	Reach more workers, particularly vulnerable groups. If done right, can provide workers with a way to provide information without sacrificing their anonymity and can be done at scale. Improve understanding of workers experiences and issues that can be followed up at audit.	Accessibility by workers in remote areas or who do not have access to mobile phones or other technology. Lack of workers' knowledge of their rights The information from surveys may identify high-risk issues, but these can often not be investigated and uncovered adequately remotely. Further on-site investigation is therefore required as a complement to information from the applications.

Considerations for use

In order to maximise the potential of worker voice technologies and ensure they are used to improve workers' conditions and contribute to sectoral structural change, a group of organisations (non-profit and for-profit technology providers) established a set of eight design and implementation principles for technology-based approaches to labour issues. The principles are called the Worker Engagement Supported by Technology (WEST) Principles.

Although the WEST Principles were developed to improve application of worker voice technologies, the principles are worth considering for any application of remote technology that involves getting information from users on the ground. For further reading on this, please read the original white paper on the West Principles.

Step 4 - Oversight

As remote auditing procedures and practice are still in their early stages and both auditors and clients are adjusting to them, it is important to maintain regular support and dialogue between parties. Oversight of the assurance providers and auditors, including any risk-assessment process followed, is also a critical component of this dialogue. Oversight assessments of the head offices of assurance providers and the witnessing of remote audits can also be conducted remotely, and many oversight bodies have developed processes to do this.

Oversight is particularly important to assess challenges around social auditing, e.g. the methods used to conduct worker interviews or how occupational health and safety is assessed through virtual site tours. Insights

from oversight activities can be used to improve remote auditing processes and increase the credibility of those processes over time.

Many of the same technologies and data as described here are applied to conduct oversight. This can extend beyond conducting an assessment to include in-depth analysis of non-conformities raised by assurance providers over time or routine transaction verification of specific commodity supply chains.

Additional tips to make step 4 successful.

Update oversight procedures to incorporate or increase oversight of remote auditing and internal/external risk assessments.

Get feedback from clients, auditors and assurance providers on their experience of remote auditing process and tools.

Regularly calibrate remote auditing approaches, data use and use of emerging technology.

Key conclusions and future directions

Risk-based approaches

The constraints and limitations of the pandemic have shown us that risk-based approaches have to be part of the future of assurance models. There is a wealth of internal and external data sources that can be used to build a risk matrix and improve it over time. Risk assessments are a crucial part of the process of monitoring the risk of non-conformity and for determining the level of assurance required – including eligibility for remote audits and feasibility of conducting them.

As a result of the pandemic, there will inevitably be a backlog of audits. Risk profiling can also be used to manage this backlog by prioritising where on-site audits are needed most and what they should focus on.

Adopting new technology

Given the variability of auditing situations and operational contexts we were faced with during the last year, it is difficult to roll out globally applicable policies and tools at this stage. Differences in audit scope, geographic contexts, types of clients, and more have always been part of audit challenges for sustainability systems. Adding the complexity of the ever-changing dynamics of the pandemic and determining what requirements of a standard can even be audited remotely makes it very challenging to implement one-size-fits-all solutions. Building up organizational resilience to deal with these issues requires flexible and non-prescriptive solutions that still maintain consistency and credibility of the process, regardless of the tools used.

Bear in mind that the use of any technology will come with limitations, risks and benefits. Technology may enable better data flows and better communication opportunities, but any tool is not a solution in and of itself. The tools do not 'solve' identified problems; solutions emerge when those receiving this information respond effectively and in a timely manner.

This requires that schemes think through the operational logistics of how new data from these applications will inform compliance evaluations. For example, will this new data be acceptable evidence on its own to raise non-conformities? If not, what criteria would determine that and what follow-up procedures need to be in place before those determinations are reached?

Therefore, ensure that the right capacities are in place before embarking on the use of any new tool. The difference between using tools and data well or poorly is about proper planning, training and capacity. It requires that qualified staff and appropriate systems are in place, so the tool can be implemented competently, that data can be analysed, utilized effectively and properly integrated into assurance systems and that it is useful to collaborative parties in the audit process.

Making remote auditing a long-term solution

If remote audit practices and risk-based approaches are built into a system now, consider what implications this new way of auditing will have on relationships, workloads and cost structures for immediate partners (e.g. clients, scheme owners, assurance providers, and oversight bodies). For example, how much effort is required by certified clients to provide the additional information? Do you need more analytical staff at either the scheme owner or assurance provider level to work with new data streams and technologies? How are costs of new tools distributed across actors and what effects will fewer on-site audits but more frequent off-site checks mean for both credibility and business models?

To help with this planning, sustainability systems and assurance practitioners should be focused on gathering data about the efficiency and effectiveness of remote auditing tools and practices. The type of data that will be useful to collect is largely comparative, looking at how remote auditing practices compare with on-site audits. Comparison data can include:

- Total staff time, and at different stages of the audit process.

- Total cost, and at different stages.

- Reliability of results, measured through tracking on non-conformities, including extent of correlation with where non-conformities are found.

- Identifying parts of the standard that lend themselves to remote verification and those requirements that lose assurance value without direct assessment via onsite audit

- Client satisfaction, measured through feedback.

In cases where data shows advantages to integrating remote auditing practices, this will help inform whether allowing remote auditing in non-crisis contexts may bring additional benefits to your assurance systems. This type of analysis can equally be applied to determine success criteria for risk-based assurance methods.

Annex 1: Examples of a few publicly available risk indices commonly referenced amongst sustainability standards (*Not a comprehensive list*)

Risk indices	Threats or risk factors considered	Developed by	Web link
Risk indices			
BSCI Country Risk	Governance	BSCI	bsci-intl.org/resource
Corruption Perception Index (CPI)	Level of corruption in the public sector	Transparency International	transparency.org
Country Policy and Institutional Assessment (CPIA)	Various	World Bank	data.worldbank.org
Employing Workers Index (EWI)	Labour market regulation	World Bank	doingbusiness.org
Environmental Performance Index (EPI)	Protection of human health and ecosystems	Yale University	epi.yale.edu
Fragile States Index (FSI)	State stability	Fund For Peace	fsi.fundforpeace.org
Gender Development Index	Gender inequality	United Nations Development Program	hdr.undp.org
Global Forest Watch	Deforestation	World Resources Institute	globalforestwatch.org
Global Fishing Watch	Illegal, Unreported and Unregulated fishing	Oceana, SkyTruth, Google	globalfishingwatch.org
Gender Inequality Index	Gender inequality	United Nations Development Program	hdr.undp.org
Global Hunger Index (GHI)	Poverty	International Food Policy Research Institute	ifrpi.org
Global Multidimensional Poverty Index (MPI)	Poverty	Oxford Poverty & Human Development Initiative	ophi.org.uk
Global Rights Index	Workers' rights	International Trade Union Confederation	ituc-csi.org
Human Development Index (HDI)	Life expectancy, education, and living standards	United Nations Development Program	hdr.undp.org
International Country Risk Guide	Political, financial and economic	PRS Group	prsgroup.com
IUCN Red list	Species extinction risks	IUCN	www.iucnredlist.org
IUU Fishing index	Illegal, Unreported and Unregulated fishing	The Global initiative against transnational organized crime/ Poseidon Aquatic resource management	iuufishingindex.net
PRIndex	Tenure security	Omidyar Network, DFID	prindex.net
Social Institutions and Gender Index (SIGI)	Institutions affecting women's and girls' rights	OECD	genderindex.org

Annex 2: Organisations Interviewed

Bonsucro

Better Gold Initiative

FLOCERT

Preferred by Nature

Rainforest Alliance

SCS Global Services

Textile Exchange

Acknowledgments