

Increased transparency and documentation of private sector contributions to NDCs



Assessment of selected protocols, report on the pros and cons, and deliver recommendations for future development

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Authors: Yan Dong (WERD Consulting)



Fatemeh Bakhtiari (UNEP DTU Partnership, UDP)

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REVIEWERS

Daniel Puig; Sandra Roxana Aparcana Robles

1. Introduction

The Paris Agreement (PA), adopted in 2015 and effective since late 2016, is the international community's blueprint for achieving the goals of the United Nations Framework Convention on Climate Change (UNFCCC). The agreement requires countries to adopt "fair and ambitious" voluntary actions to combat climate change. These actions are described in the so-called Nationally Determined Contributions (NDCs). In addition, the PA includes transparency provisions, to monitor progress with its implementation, thus helping build trust in the international climate-change regime.

Several programs and frameworks have been developed to help nations implement the above transparency provisions, including protocols for assessing impacts associated with climate policies and institutional capacity. .

To achieve NDC goals, private sector engagement is indispensable. In order to reduce carbon emissions, the private sector shall take climate actions in accordance with business strategies. Climate actions may take various forms, such as increases in the efficiency with which energy is transformed and used, or the development of low-carbon materials.

However, limited or no guidance is available on a number of key issues. What are the sustainable development co-benefits of the actions above? How can the sustainable development impacts of the climate actions above be measured? The project "Increased transparency and documentation of private sector contributions to NDCs" aims at filling this gap.

There are two working packages under this project.

1. Prepare a guide for companies wishing to adopt an existing protocol to report on their greenhouse-gas emissions, highlighting common pitfalls (for example, with regard to materiality) and suggesting potential solutions to overcome them.
2. Prepare a guide for companies wishing to adopt an existing protocol to report on the sustainable development impacts from their mitigation actions, highlighting common pitfalls and suggesting potential solutions to overcome them.

In each of the working packages, existing protocols are reviewed and assessed first, from which recommendations are drawn as input to develop guidance. This deliverable provides inputs for the second work package above (sustainable development impacts).

The work is conducted under three steps:

- a) Review existing protocols that may be suitable to assess the sustainable development impacts of climate change-mitigation actions in the private sector (i.e. companies), with a view to strengthening the sustainability of these actions.

- b) Assess the pros and cons of the selected protocols, to draw best practices and recommendations for future improvement.
- c) Prepare a guide for companies wishing to adopt an existing protocol (to report on their sustainable development impacts from their mitigation actions) based on the recommendations above (Transparency guidance).

Figure 1 present the steps in details.

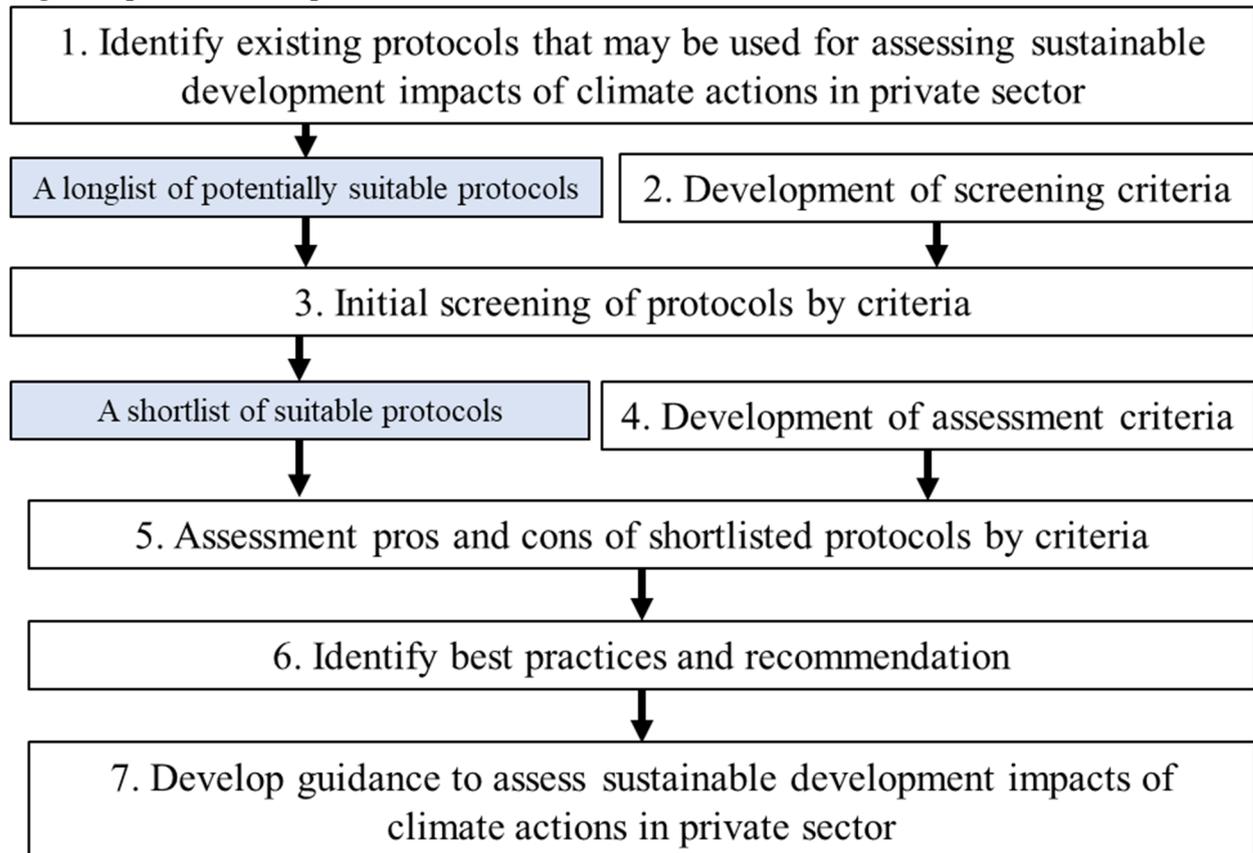


Figure 1. Steps to identify and assess protocols, and develop guidance to assess the sustainable development impacts of climate change-mitigation actions by the private sector. The blue boxes represent results, while the white boxes represent tasks.

Step a) was carried out in deliverable 1 “Review methods to assess the sustainable-development impacts of climate change-mitigation actions by businesses (companies)”. The following seven protocols are shortlisted for further assessment:

- **SDG Compass- The guide for business action on the SDGs** (hereinafter referred to as SDG Compass)
- **ICAT Sustainable Development Methodology** (hereinafter referred to as ICAT-SD)
- **GRI Business Reporting On The SDGs** (hereinafter referred to as GRI-SDG)
- **SASB standards**
- **Sustainability Assessment Guide-SMART** (hereinafter referred to as SMART)
- **Gold standard for the global goals** (hereinafter referred to as Gold Standard)

- **SAM Corporate Sustainability Assessment (CSA)** (hereinafter referred to as SAM-CSA)

These protocols provide step-by-step guidance that is potentially applicable to assess the sustainability impacts associated with climate action by the private sector, across the three pillars of sustainable development (economic social and environmental).

This deliverable only focuses on step b) assess the pros and cons of the above shortlisted protocols when applied to assess the sustainable development impacts of climate actions in private sector. It identifies good practices and provides recommendations for future improvement.

To conduct the work, the following steps have been taken:

1. Assess the protocols' pros and cons by criteria.
2. Interview protocol developers to complement the results of the desk study above.
3. Draw suggestions to advise companies that wish to use any of the seven protocols above.

Chapter 2 describes the approaches adopted to assess the protocols through a screening process based on a number of criteria, and through interviews with protocol developers. Chapter 3 provides the assessment results. Chapter 4 gives suggestions and recommendations.

2. Approach

This chapter describes the approaches to assess the protocols. Section 2.1 presents a definition of “protocol”, and the good practices of a protocol in the context of this study. Section 2.2 provides the criteria for assessing the pros and cons of the protocols. Section 2.3 describes the approaches adopted in interviews, to obtain information on pros and cons, and recommendation of future improvement of the protocols.

2.1. Scope of the assessment

Protocol refers to an established set of generic principles or detailed procedural steps for the disclosure of data relevant to sustainable development. Under a different context, it may be called framework, guideline, initiative, principle, tool, method, standard, etc. Hereinafter, we refer to it simply as “protocol”.

The aim of the study is to review protocols that are potentially suitable for companies to assess the sustainable development impacts associated with the climate actions. A good practice protocol should at least contain guidance concerning the following topics:

- How to identify sustainable development impacts
- How to assess sustainable development impacts
- How to interpret and use the results

Note that climate action can exist in various forms. Thus, a good practice protocol should also include the following features:

- Guidance on how to define the boundaries of the analysis and, by extension, the goals of the assessment.
- A flexible framework, so that it can be applied to various types of activities, projects, entities, policies, actions, etc.
- Guidance on the consideration of supply chain in the assessment, wherever relevant.
- Guidance on technical methods that are transparent and replicable, as well as scientifically sound.
- Guidance on how to establish and run an independent verification and validation process.
- Relevance to the Sustainable Development Goals

In addition, the following features will be advantageous to have:

- Provide a software or online tool.
- Include examples.
- Provide a training programme.
- Offer contact points, ideally in different countries.

The shortlisted protocols are developed for various purposes, including reporting sustainable development impacts for notifying the public, assessing and identifying sustainability risks and opportunities for company strategies, applying for sustainability certifications, etc. None of them is specifically designed for assessing the sustainable development impacts arising from climate actions by the private sector. This does not mean that they are not applicable for such purpose. Nonetheless, they require further assessment, to identify the pros and cons in the context of how companies can use the existing protocols to assess the sustainable development impacts arising from their climate actions.

2.2. Approach for assessing the pros and cons of the protocols

Following the good practices recommended by experts in section 2.1, each of the shortlisted protocol was evaluated using Table 1. More details on the assessment criteria are available in Appendix 1.

Table 1 Evaluation criteria of the shortlisted protocols

| | | |
|---|--|--|
| Name: | | |
| URL: | | |
| Origin: * | | |
| Year: ** | | |
| The application context | Is the protocol designed to be used by companies or projects? | |
| | Is it applicable in company? | |
| | Is the protocol generic, or sector-specific? | |
| | Was the protocol designed for national/subnational, entire companies, or individual plants/projects? | |
| The assessment approach | What are the assessment steps in the protocol? | |
| | Does the protocol draw on another protocol, such as the GRI's? | |
| | Does the protocol outline how it compares with other protocols? | |
| The impacts considered | What are the sustainable development impacts considered in the protocol? | |
| Requirements on verification and third-party validation | Does the protocol include a verification component? | |
| | Does the protocol provide guidance on third party validation/assurance? | |
| Consideration of technical details | Does the protocol include guidance on how to develop baselines? | |
| | Does the protocol offer guides on ex-ante and ex-post SD impact assessment? | |
| | Does the protocol consider impacts in supply-chain? | |
| | Does the protocol consider potential double-counting? | |
| | Does the protocol include guidance about how to assess uncertainty? | |
| Communication and reporting | Is the protocol widely known (as measured by the number of internet hits)? | |

| | | |
|--|--|--|
| | Has the protocol been used by Latin American companies? | |
| | Is the protocol relevant for SDG goals? | |
| | Does the protocol provide user-friendly software, in addition to the guidance? | |
| | Does the protocol include advice with regard to showcasing example reporting to company stakeholders and the wider public? | |
| | Does the protocol have a contact point in country /region? | |
| | Does the protocol provide training programs? | |

*Origin refers to the country targeted by the protocol, or ‘international’, when there is no specific target country.

**Year refers to the year in which the protocol (or its latest update) was released.

More details on the questions are described in Annex 1.

As shown in table 1, to ease our assessment, we categorized the criteria into the following groups and will report the cons and pros of each protocols using this grouping.

- **The application context**

Firstly, the original application context of the protocol is identified, including the purpose of the protocol (e.g. designed for assessing projects, policies or for reporting purposes), its intended geographic area of application and sector coverage (e.g. sector specific or generic), and the scale of application (e.g. on national level of project level). Subsequently, the possible climate actions that can be assessed by the protocol are discussed.

- **The assessment approaches**

Although all shortlisted protocols provide step-by-step guidance, the steps differ from one another, mainly due to the intended application context. The characteristics of the assessment approach, as well as the pros and cons are discussed for each of the protocols.

- **The impacts considered**

There is a wide range of sustainable development impacts. Not all protocols cover all types of impacts that may arise from climate actions. The impacts covered are described.

- **Requirements on verification and third-party validation**

Verification and validation are important processes to assure the quality of the input data and the resulting assessment. For this reason, third-party verification and validation is considered

good practice. Whether this good practice is required in the protocols is described.

- Consideration of technical details

The evaluation of sustainable development impacts requires considerations on several technical aspects, e.g. whether to consider supply-chain in the evaluation system; how to avoid double counting among different components in the system; how to define baseline and alternative scenarios; and how to deal with uncertainty. Such technical considerations are discussed for each protocol.

- Communication and reporting

The protocols aim at delivering positive sustainable development impacts, which will be communicated and reported to relevant stakeholders. Therefore, the recognition of the protocol, especially in Latin American countries, is essential for the protocol to be better perceived by the targeted audience of this project – namely, Latin American stakeholders. Moreover, because the SDGs are well-known worldwide, it helps stakeholders understand the protocol better if the protocols relate their assessment results with the individual SDGs. In addition, other features can also facilitate the use of the protocol, such as user-friendly software with good guidance, case examples, training programmes and contact points in different countries. Whether these features are included in the protocol is described.

2.3. Interview approach

Five interviews were conducted in October 2020 with project developers. The interviewees are listed in table 2.

Table 2 List of Interviewees

| Position hold | Consultation approach |
|--|-----------------------|
| Senior manager at Gold Standard | Online interview |
| Manager of International Policy at Global Reporting Initiative (GRI) | Online interview |
| Manager at World Resource Institution | Online interview |
| Help line at SAM-CSA | E-mail exchange |
| Director at SASB Standards | Online interview |

The interviews were conducted in a semi-structured manner. A set of pre-defined questions were asked to the interviewee, with no restrictions on the scope of the answers. Thus, the conversation spilled over related other topics not covered by the questions, allowing the exploration of undiscovered pros and cons.

The following questions were asked in the interview.

- A1. What purpose is the protocol most used for?
- A2. Who are the users? What about Latin American companies? Can you give few examples?
- A3. Do you think the protocol can be used to assess sustainable development impacts arising from climate actions in companies? If yes, what types of climate action do you think is the protocol applicable?
- A4. What do you think about the guidance on defining assessment objective and system boundary? Is it challenging for the users? How can it be improved?
- A5. What is considered as sustainable development impacts in the protocol? What do you think about the coverage of impacts?
- A6. How do you feel about the impact assessment step? Is it challenging for the users?
- A7. Is there any plan to link the protocol with SDGs? Why? (only for the ones that have not linked yet)
- A8. Have you tried to link SD impacts with NDC of your country?
- A9. Are you planning to have online tools to facilitate the implementation of the protocol?
- A10. Is there any plan to establish contact point, training courses, etc.?
- A11. Open question: what are the challenges in general of using such protocol?

3. Pros and Cons of the shortlisted protocols

In this section, the information obtained from documents and interviews is summarized for each shortlisted protocol. It is then evaluated against the criteria presented in section 2.2 to identify pros and cons.

3.1. GRI series, including SDG Compass and GRI-SDG

Global Reporting Initiative (GRI) has developed and kept updated a set of global standards that provides a global common language for organizations, including the private sector, to report on their sustainability impacts. To cater the need of companies regarding the SDGs, GRI has further developed a series of protocols based on GRI standards. The first one is the SDG Compass, published in 2015. It was co-developed together with UN Global Compact and the World Business Council for Sustainable Development (WBCSD). It aims to guide companies wishing to align their strategies with SDGs, as well as measure and manage their impacts on

the SDGs. Building on the SDG Compass, in 2018 GRI has developed Business Reporting on the SDGs: A Practical Guide (GRI-SDG) together with UN Global Compact. It provides guidance to advise companies on how to use the existing GRI standards and other recognized standards for reporting on SDG impacts. SDG Compass and GRI-SDG are both rooted in GRI standards, and they share the same approaches and principles. Here we review these two protocols together with the GRI standards as a series.

The application context

The GRI series is designed for companies and organizations. It focuses on company business strategies and reporting processes, with the intention to embed SDGs in the existing reporting schemes. It also helps businesses explore new opportunities, as well as mitigate risks on sustainable development. This is done by prioritizing and measuring the performance of the company against the various SDGs. The protocol is suitable to evaluate whether climate action is needed in a company. It can also be used to assess the impacts of climate action in company, regardless of size, location and sector. The only limitation is that the climate actions shall have impacts on the chosen SDG performance indicators in the reporting scheme.

The assessment approaches

A five-step approach is established to identify and measure SDGs, including the following:

- Understanding the SDGs
- Defining priorities
- Setting goals
- Integrating SDGs with business
- Reporting and communication

As a first step, guidance is developed based on the GRI-SDG generic framework. Using this guidance, the SDG goals and targets can be analyzed, and possible business actions to achieve targets can be identified. In addition, the guidance developed summarizes available business standards (including indicators) to assess progress towards the targets. The business standards considered include, among others, those developed by GRI, WHO global health observatory indicator, UN Global Compact- Oxfam Poverty Footprint, and CDP.

As a second step, SDG targets are prioritized, following a two-pronged approach. The first element focuses on the negative impacts on SDGs that are linked with business operations and value chains. The second element aims to identify the SDG targets that a business can contribute most through beneficial products, services or investments.

As a third step, the negative and positive SDG impacts are measured and analyzed. It is recommended to define the baseline, set corporate objectives and find the relevant approaches to do so. For the last two steps, it is recommended to use the existing reporting schemes such as GRI, CDP, UN Guiding Principles Reporting framework and CDSB Framework to communicate the SDG performance. Reporting on the progress towards the identified goals is encouraged, including disclosure on whether the objectives are met, anticipating performance

gaps, reflecting on improvements, etc.

Note that the reporting on progress is on the absolute metrics, e.g. CO₂ emissions per year, not the changes on the metrics, e.g. CO₂ emission reductions per year. In order to observe how an action changes the company performance on an indicator, a comparison between two reports is required. Some companies decide to disclose in their annual report an overview of the past year's performance, which provides an opportunity to compare and assess whether they are aligned with their target.

The impacts considered

The impacts that are covered under the protocol highly depend on the choice of SDGs, the chosen assessment approaches, and the chosen reporting schemes. In principle, all SDG impacts may be covered under this protocol. However, as the protocol services the purpose of a specific business strategy, the coverage of impacts varies among different companies, with a focus on those that are relevant to business opportunities and risks. The GRI-SDG practical guidance provides additional advice in this regard, and encourages companies to conduct a proper materiality analysis, as provided by the GRI Standards. The materiality assessment enables a company to identify the most significant impacts it has on sustainability issues. This also means that the protocol is unlikely to reveal all relevant sustainable development impacts arising from a climate action, but only the impacts that are relevant to the chosen SDGs.

Requirements on verification and third-party validation

When considering the selection of indicators and data collection issues, internal and external verification is recommended, to increase the reliability of the data. However, it is not mandatory. Third-party validation is not required.

Consideration of technical details

The protocol presents clear guidance on how to set baseline and ex-ante scenarios to help companies set goals. It is recommended to consider the entire value chain as the starting point to define priorities. The consideration on uncertainty and avoidance of double-counting is not mentioned.

Communication and reporting

The protocol is developed to help a business integrate the SDGs into its business strategy. The protocol developers are well-known among private companies. GRI standards for reporting sustainability issues are also widely used, especially by large listed companies. Therefore this series of protocol attracts high attention. The SDG Compass has an online database that summarizes SDG indicators and the relevant tools to assess these indicators. However, the database cannot be directly implemented on project, but requires experts to select the relevant indicators and approaches for prioritizing and assessing SDGs. Illustration examples are available in the document, which facilitate the use of the protocol. Recently GRI launched the GRI Academy, where online courses, webinars and round tables are available for training.

Workshops for capacity building have been arranged via UN Global Compact. Though GRI does not have its own contact points, it is providing information and training via UN Global Compact contact points in over 70 countries. Meanwhile, consulting firms are also available to provide helps when needed.

Summary and recommendation

Table 3 Pros and Cons summary of GRI series protocols

| | Pros | Cons |
|---|--|--|
| The application context | It is possible to use the protocol to assess the climate actions impacts on the SDGs on company performance level. | Only when climate issues are identified as prioritized topics in the company, the protocol can be applied for assessing climate actions. |
| The assessment approaches | The assessment framework is comprehensive, including goal and scope definition, impacts identification and impact assessment approaches. | The assessment framework requires self-prioritization of sustainability issues, which may be challenging, especially for non-expert users. |
| The impacts considered | Potentially all relevant SDG impacts can be considered in the assessment. | The coverage of impacts highly depends on the choice of SDGs and the reporting schemes. This may lead to the focus on the SDGs that are relevant to business opportunities and risks, but neglecting the others. |
| Requirements on verification and third-party validation | Verification on data is recommended. | Verification and validation are not required. |
| Consideration of technical details | There is guidance on baseline and ex-ante scenarios. The consideration of supply chain is recommended. | There is no guidance on uncertainty analysis and the avoidance of double-counting. |
| Communication and reporting | The protocol is designed for company to integrate SDGs into business strategy. The recognition in the private sector is high. Illustration examples are | The indicator and tool database cannot be directly implemented on projects, but requires expert knowledge to choose the relevant ones for implementation. |

| | | |
|--|--|--|
| | <p>provided in the document.</p> <p>Webinars, workshops and contact points are available.</p> <p>A database providing SDG indicators and tools is available.</p> | |
|--|--|--|

When using GRI series protocols for assessing climate actions in private sectors, bear in mind that the original purpose of this protocol is to enable the private sector to measure and manage their positive and negative impacts on the SDGs. Therefore, the protocol is more suitable to identify where climate action should be taken, rather than assessing sustainable development impacts of climate actions in company. However, as most companies update the sustainability reporting at least once a year, it is possible to see the impacts caused by large scale climate actions in the company by comparing reports published before and after the action.

The challenge that users face when implementing GRI series protocols are to prioritize the right set of SDGs. This step requires collaboration with stakeholders who understand the business and climate actions, as well as experts that understand sustainability consequences. Communication and coordination between those stakeholders are the key for successful implementation. Therefore it is essential to get top management and the relevant stakeholders on board, following relevant GRI standards and principles. Although the sustainability impacts covered by the GRI series are broad, it is very important for the companies to look beyond, and identify other potential impacts caused by the specific action, e.g. avoid using suppliers engaged in overtly unsustainable practices. Another point worth noticing is that, by prioritizing SDGs at the beginning of the process, sustainability impacts that become significant or important to stakeholders at a later stage of the project may be neglected. Therefore, it is suggested to conduct a screening process as the first step.

For SMEs that would like to implement GRI series protocols to assess SDG impacts of climate actions, they may find it challenging to engage in the process. Data collection and monitoring can also be difficult. However, the protocol provides a comprehensive database of SDG indicators and tools. With expert knowledge, it is possible to find the relevant ones to carry out the sustainable development assessment of a climate action.

3.2. ICAT Sustainable Development Methodology

ICAT-SD is part of a series of guidance documents produced under the umbrella of the Initiative for Climate Action Transparency (ICAT). It provides an overarching framework and process to assess the sustainable development impacts of policies and actions. The guidance includes general principles, concepts and procedures that are applicable to all types of policies and actions, all sectors, and all types of sustainable development impacts.

The application context

ICAT-SD allows flexibility when defining the objective of the assessment and the system boundary. For example, user can first describe the policy or action to be assessed. Then they can identify the changes in society, environment or economy that may be affected by the policy or action. They can further refine the scope of the assessment to only reflect changes within certain geographic boundaries, time spans, etc. Therefore, although designed to assess large-scale policies and actions, the protocol can easily be adjusted to assess sustainable development impacts arising from smaller-scale projects.

Considering the broad application context of ICAT-SD, the protocol can be used for most climate activities in the company that are action oriented, for example, a climate campaign, or a project to improve energy efficiency. However, ICAT-SD cannot be applied if the climate activity in the company is target oriented, e.g. a project to find the pathways to reach carbon reduction target.

The assessment approaches

Inspired by the greenhouse gas protocol policy and action standard, and the framework for measuring sustainable development in NAMAS, ICAT-SD provides step-by-step guidance covering the following aspects.

- Determining the objectives of the assessment
- Defining the assessment regarding the policy to be evaluated, and the impacts to be considered
- Conducting a qualitative approach to impact assessment
- Conducting a quantitative approach to impact assessment, including guidance on baseline, ex-ant and ex-post scenarios, and uncertainty
- Developing monitoring and reporting procedures
- Evaluating synergies and trade-offs for final decisions

Once the assessment objective and system boundary are defined, the next step is to identify the potential impacts that may be caused by the policy or action. Here the impacts are referred as differences on society, environment or economy, with and without the policy or action. For example, if the assessment objective is an action to replace all energy supply in the company to renewable sources, examples of impacts can be reduction of CO₂, NO_x and SO₂ in the environment. It is challenging to identify the potential impacts, especially for non-experts. Though ICAT-SD provides a long list of potential impacts, the users still need to establish the casual links between the policy and the impacts.

Once the impacts are identified, users have the possibility of using qualitative, or/and quantitative approaches to determine the severity of the impacts. Here ICAT-SD presents several methods to qualitatively assess the severity of the impacts, using judgement on significance and relevance of the impacts in response to the policy or action. With regard to its quantitative assessment, ICAT-SD gives recommendation on the indicators that can be used to monitor impacts. A database of approaches to assess indicator performance is also available. However, users have to make methodological value judgements that can be challenging for the non-expert.

The impacts considered

The coverage of impacts depends on the impacts identified, and the assessment approaches used. In theory, it can potentially include all sustainable development impacts that are relevant to the policy or action. It is also recommended to take into account all relevant and significant impacts. Nonetheless, in each case the coverage of impacts highly depends on the users' choices on the indicators and the assessment approaches.

Requirements on verification and third-party validation

At its current stage, ICAT-SD recommends to verify the data, especially in the monitoring plan, but it is not mandatory. Third-party validation is not required yet.

Consideration of technical details

ICAT-SD describes how to set up the baseline and ex-ante/ex-post scenarios for quantitative assessment. Users need to quantitatively assess the indicator performance in each of the scenarios, and calculate the difference as the impacts. In addition, ICAT-SD also provides guidance on uncertainty assessment and monitoring, which support users to assure data quality and assessment results over a long-term application. However, the consideration of supply chain is not emphasized in ICAT-SD.

Communication and reporting

ICAT-SD is developed under a consortium that consists of UNEP and the World Resources Institute (WRI). The targeted users are governments, donor agencies and financial institutions, businesses, research institutions and NGOs, and local communities. It was first published in 2018, and currently is under application in various developing countries, in collaboration with national governments. Considering the newness of the protocol and the early stage users (national governments), recognition of the protocol is not high among the private sectors.

ICAT-SD links its assessment result with SDGs. In the list of recommended impacts, many impacts are labeled with relevant SDGs. In the circumstances that the project has a positive or negative contribution to these impacts, it can also report its contribution to the labeled SDGs. This can facilitate the use and communication of the protocol, if SDGs is to be used as the criteria.

ICAT-SD provides good examples both within the text as illustration, and through case studies. Webinars are also available to explain the steps in detail. Currently ICAT-SD is developing additional materials, with a view providing training courses in near future. These will help the users to understand the protocol better. However, it does not provide any software to help the users identifying or assessing impacts, or any contact point in countries yet.

Summary and recommendations

Table 4 Pros and Cons summary of ICAT-SD

| | Pros | Cons |
|---|---|--|
| The application context | It is flexible to be applied to assess climate actions in the private sector in various format, e.g. projects, initiatives, activities, policies, actions. | The language, terms, key concepts and examples in the methodology are public policy oriented. Companies may require some “translation” to understand how the methodology is applicable to their circumstances. |
| The assessment approaches | The assessment framework is comprehensive, including goal and scope definition, impact identification and impact assessment approaches. It provides possibility of assessing the impacts both qualitatively and quantitatively. | The assessment framework does not have pre-defined sets of impacts or assessment approaches. Instead it requires impacts identification for each individual case, where the users also need to find the relevant approaches to assess the impacts. This requires expert knowledge. |
| The impacts considered | Potentially all relevant sustainable development impacts can be considered in the assessment. | The coverage of impacts various from case to case, highly depends on the impacts identified by the users and the choices of assessment approaches. There is no guaranty on the minimum coverage of impacts. |
| Requirements on verification and third-party validation | The lack of mandatory requirements on verification and validation provides the flexibility for customized application in a wide range of situation. It also avoids the need to create an application “eco-system”, which is usually needed to enforce requirements. | The lack of mandatory requirements on verification and validation limit the reliability of the assessment result. |
| Consideration of technical details | There is guidance on baseline and scenario setup, monitoring and uncertainty assessment. | The consideration of supply chain is not mandatory, that may lead to the ignorance of some major impacts arising from the supply chains. |
| Communication and reporting | The impacts are linked with SDGs. | The recognition of the protocol is not high in private sector. |

| | | |
|--|--|--|
| | <p>Examples are provided.</p> <p>Webinars are available.</p> | <p>It does not provide any software to help the users identifying or assessing impacts.</p> <p>There is no contact point in countries yet.</p> |
|--|--|--|

ICAT-SD is a flexible tool that can be used for assessing sustainable development impacts arising from most climate actions in companies. The protocol describes principles, steps and technical details in depth. However, ICAT-SD is originally designed for assessing sustainable development impacts of policies. It is an assessment framework, rather than a tailored implementation standard for companies to follow. Therefore, company users may find it challenging to make the right choices for carrying out the assessment properly. For example, if the climate action is to reduce GHG emission from supply chain, how to define boundary conditions (i.e. delimit the supply chain) is not described in the protocol. Similarly, ICAT-SD does not provide a fixed set of indicators and assessment approaches. As there is no such guidance on how to make the right choices in a business context, expertise is required to identify indicators and assessment approaches case by case. Moreover, ICAT-SD does not have safeguard requirements on minimum impacts to be covered. It is strongly suggested to screen all relevant impacts first, ensure that the significant negative and positive ones are not neglected in the assessment.

3.3. SASB Standards

SASB standards published their complete set of standards in in 2018. The set is consisted of 77 industry-specific standards, that aims at providing minimal set of financially material sustainability issues, metrics and technical protocols for companies in the specific sector. It has been applied now by more than 400 companies, with the majority of users located in the US.

The application context

SASB Standard is originally designed for helping companies disclose the material sustainability issues to investors. Within this context, the protocol heavily focuses on the topics that are of investors' concern, i.e. the issues that may cause risks to the financial status of the companies. As the issues of concern vary among sectors, company is recommended to apply the sector specific SASB standard that suits its situation. SASB standard is rather a protocol that identifies if a climate action is needed within a company, due to its potential damage on the company reputation, thus risks to financial status. In terms of impacts assessment, if the company shall take a climate action that is within the scope of the company financial risk focus, SASB can be used for assessing the consequences of the action.

The assessment approaches

SASB Standard is a voluntary scheme. The objective of the assessment is already pre-defined. The system boundary is defined in each of the industry-specific SASB standards. In most cases, the system to be covered

includes the parent and subordinate entities that are consolidated for financial reporting purposes. Supply chain is often covered in the system as well, especially for the industries that may have high sustainability risk in supply chain such as agricultural products industry.

Company can use the protocol following three steps:

- Determine which industry-standard is relevant for the company
- Choose disclosure topics
- Choose associate metrics to report and carry out the reporting process

For each disclosure topic, only limited amount of metrics and assessment approaches are presented. The metrics is a combination of quantitative indicators (e.g. number of incidents of non-compliance associated with water quality), which represent 74% of the standards, and qualitative indicators (e.g. discussion of long-term strategy for manage GHG) to provide context and supplemental information for the quantitative metrics reported. The users can decide which metrics to include in the reporting. The data collection may be a big challenge for the users, especially to derive results on the quantitative indicators.

Impacts considered

The impacts that are covered under the protocol are rather limited, as the SASB Standard aims at providing minimal sets of sustainability issues to be covered in the financial report. It varies from one sector to another. The users have the freedom to choose which metrics (impacts) to include. SASB standard also recommend users to look beyond the metrics provided in SASB Standards, and choose to include extra metrics wherever relevant. Thus the coverage of impacts may vary from case to case depending on the choice of the users. There is no guarantee on minimum impacts coverage, nor safeguard issues.

Requirements on verification and third-party validation

There are no requirements on verification and validation yet. However, SASBs Standards Application Guidance notes that the standards are designed to serve as a basis for suitable criteria if an entity chooses to seek third-party assurance.

Consideration of technical details

The protocol only requires reporting on the absolute values or status of the metrics, rather than the changes on metrics over a time period. Therefore baseline and ex-ante/post scenarios is not used. Several industry-specific standards include metrics that evaluates the performance of supply chain (e.g. percentage of agricultural products sourced from supplier with food safety certification), but it is not mandatorily to include these metrics in assessment. Discussion on uncertainty is encourage, but without guidance on how to do so. There is no guidance on the avoidance of double-counting.

Communication and reporting

SASB Standard is relatively new, but has already been used by over 400 companies in the world, including Latin American companies. Its recognition is increasing among the private sectors, as well as in the investment community. The metrics are not yet connected with SDGs. It provides showing case examples on the website, as well as online webinars and workshops to helps the users to understand the protocol.

Online tools such as materiality map and materiality matters navigator are available to help companies identify its sustainability issues within the specific sector. An online tool named Implementation Primer is also available to help companies understand the SASB standards and prepare disclosure. It does not have any contract point to facilitate the use of the protocol in different countries. But it provides contact information of analysts in each sector for answering inquiries. When in-house capability is lacking, company may choose to use external consultants for carrying out the assessment.

Summary and recommendations

Table 5 Pros and Cons summary of SASB Standards

| | Pros | Cons |
|---|--|--|
| The application context | It is possible to use the protocol to assess the climate actions sustainability impacts on company level. | Only when the climate action is within the scope of the company financial risk, the protocol can be applied. |
| The assessment approach | The protocol defines clear objectives. It provides impacts (metrics) and approaches for reporting the impacts. Both qualitative and quantitative approaches are available. | Objective of the assessment is already pre-defined. Therefore the protocol has limited applications for other purpose rather than identifying sustainability issues and assessing the sustainability performance of a company. As the protocol gives flexibility on the choice of metrics, the users may find it challenging to decide which one to report and where to get the data. |
| The impact considered | The protocol gives users flexibility on the choice of impacts. It also encourages users to include extra impacts that is not covered by the protocol. | The protocol only covers minimum sets of impacts that are needed in financial reporting. The coverage depends on the sector and the choice of users on metrics. There are no requirements on minimum coverage, nor safeguard principles. |
| Requirements on verification and third-party validation | | Verification and validation are not required. |
| Consideration of technical details | The consideration of supply chain is included in some standards. It is suggested to discuss uncertainty wherever relevant. | Baseline and ex-ante scenario are not discussed. There is no guidance on how to perform uncertainty analysis and avoid double-counting. |

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| <p>Communication and reporting</p> | <p>Showing case examples are provided in the document.</p> <p>Webinars and workshops are available.</p> <p>Online tools for help users understanding the standards, and identifying potential sustainability risks are available.</p> <p>Well-known in the private sector and investment communities.</p> <p>Online help is available via contacts of expertise for each sector.</p> | <p>There is no contact point in various countries.</p> <p>The impacts are not linked with SDGs</p> |
|------------------------------------|--|--|

The major challenge users may find when using SASB standards is to identify the sustainability issues that is relevant for the company. Considering the fast development of business models, a company may find it difficult to fit into one particular industry, thus not able to identify the industry specific sustainability impacts. As SASB Standards only provide minimum coverage of sustainability impacts that are of investors’ concern, company should consider exploring extra impacts that are particularly relevant for its own business operations.

Once the impacts are identified, users will face the next challenge: data collection for carrying out the assessment. Especially for SMEs, where the relevant management system is not in place, data availability shall be an obstacle to overcome.

Overall, SASB Standards is a good protocol for identifying the sustainability issues to be disclosed to the public. In terms of climate action, it is more suitable for discovering whether climate action is needed, than assessing the sustainability impacts of the climate actions. However, for companies where climate action is of concern, SASB can still be used for assessing the consequences of the action.

3.4. Sustainability Assessment Guide-SMART

The protocol was developed in 2018 by Universitat Jaume I, under the H2020 research project “Sustainable Market Actors for Responsible Trade (SMART)”. It is a framework to assess sustainable development performance of organizations. Following this guidance, case studies will be carried out in the textile and mobile phone industries, to test its feasibility.

The application context

The protocol provides a flexible and scalable framework to help organizations assess environmental, social and economic impacts. It is applicable to any type of organizations,

regardless of its activities, structure, size and location. As the protocol only assesses impacts on organizational level, it can only be used to assess the sustainable development impacts of climate actions that shall have an impact across the whole organization (IS MY RE-WORDING CORRECT?).

The assessment approaches

The assessment approach proceeds along three steps. The first step aims to determine the objective and scope of the assessment, and ensure the commitment of stakeholders. The second step aims to analyze impacts. Here, the concept of “Organizational Environmental Footprint” is used to measure environmental and social impacts. The SOGRES-MF methodology, developed under the same HZ2020 project, is used to assess economic impacts. Afterwards, a so-called Hotspots Analysis Overarching Methodological Framework should be applied, to identify the hotspots that the organization should focus on for further improvement. The last step is reporting, where the organization communicates the sustainable development performance with relevant stakeholders and sets up goals to manage changes.

Three overarching principles are required during the assessment steps. The first principle is traceability, and seeks to ensure that direct and indirect impacts arising from the value chain are considered. The second principle is assurance, and seeks to ensure, via auditing, that the information coming out of the process is relevant and reliable. The last principle is continuous improvement, and requires the organization to work towards performance improvement over time.

As the protocol does not provide flexibility in the choice of indicators and assessment approaches, users will find it easy to follow the steps. However, the assessment approaches are rather comprehensive, and involve new methodologies. Therefore, it may require expert knowledge to carry out the assessment.

The impacts considered

The impacts coverage is comprehensive. It includes the most commonly considered environmental, social and economic impacts. Users should assess all impacts without exceptions. In this way, comprehensiveness is increased.

Requirements on verification and third-party validation

The Assurance principle requires that the information is verified and validated by external-assurance providers.

Consideration of technical details

The protocol only requires reporting on the absolute values or status of the metrics, rather than the changes on metrics over a time period. Therefore baseline and alternative scenarios are not used. The Traceability principle requires the consideration of value chains, including suppliers. There is no guidance on uncertainty or concerning the avoidance of double-counting.

Communication and reporting

SMART is developed under a scientific research project. It has not been implemented yet. Therefore its recognition in the private sector is very low. The protocol does not relate impacts with SDGs. It also does not have any software, contact point, training program and showing case examples.

Summary and recommendations

Table 6 Pros and Cons summary of SMART

| | Pros | Cons |
|---|---|--|
| The application context | It is possible to use the protocol to assess the climate actions impacts on company level, regards of location, sector and size of the company. | Only when the climate action has an impact on the organizational level, the protocol can be applied. |
| The assessment approaches | The assessment framework is comprehensive, including goal and scope definition, impact assessment and reporting steps. The assessment steps and approaches are fixed, therefore easy for users to follow without choices to be made. | The impact assessment are rather comprehensive and complicated, which may require expert knowledge for carrying out the assessment. |
| The impacts considered | The coverage of impacts is comprehensive. It is mandatory to go through all of them, thus guarantee that no impacts will be omitted. | |
| Requirements on verification and third-party validation | Verification and third-party validation are required. | |
| Consideration of technical details | The consideration of supply chain is included via Traceability principle. | Baseline and ex-ante scenario are not discussed. There are no guidance on how to perform uncertainty analysis and avoid double-counting. |
| Communication and reporting | | The recognition is low in private sector. It does not provide any software to |

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| | | <p>help the users identifying or assessing impacts.</p> <p>There is no contact point in various countries.</p> <p>The impacts are not linked with SDGs.</p> <p>Examples are not provided.</p> <p>Training programs are not available.</p> |
|--|--|---|

The SMART protocol provides straightforward prescriptive approaches to assess the sustainable development impacts of any companies (i.e. little choice is left to the users). Considering that the impacts coverage is comprehensive, and the users cannot omit any impacts, it guarantees that relevant impacts will be assessed. Regardless of the format of the climate action, as long as it has impacts on the company level, the impacts can be revealed.

The protocol is newly developed under a scientific research project. The assessment approaches are rather new and comprehensive, which is demanding on resources and on the users in terms of required expertise. It may also be challenging for the users to follow the three principles, especially the traceability principle, as it requires tremendous effort to trace the whole value chain. A screening process may be required to identify the key system boundaries and hotspot processes before carrying out the full assessment. As it has not been implemented yet, there may be unforeseeable obstacles, especially regarding stakeholder involvement, which requires a more detailed guidance.

3.5. Gold standard for the global goals

Gold standard was established in 2003 as a best practice standard, to ensure that climate projects under Clean Development Mechanism (CDM) delivers beneficial sustainable development impacts. The projects that meet the requirements in the standard can acquire project design certifications and/or project certification, showing its positive impacts on climate and sustainable development. It includes a set of general requirements, including step by step guidance, safeguarding principles, stakeholder engagement requirements, and sustainable development goals requirements.

The application context

Gold stand is designed to measure and report the climate and sustainable development impacts of projects. The users of Gold standard include project developers, as well as companies. Companies mainly use the Gold standard for reporting purposes and finance claims on the certified/verified emission reductions achieved. In principle, Gold standard is applicable to

measuring sustainable development impacts of climate action in the companies, if the climate action is in the format of a project, e.g. installing PV panels, carbon off-set projects, planting forests, and adopting a new technology in the production lines. It can be applied on any type of project, except those associated with geo-engineering or energy generated from fossil fuels or nuclear energy, fossil fuel switching, or any project that supports, enhances or prolongs such energy generation.

The assessment approaches

The objective of the assessment is already defined, that is to judge if the project can obtain the Gold standard certification. Therefore the project design and plan must meet the Gold standard requirements, including safeguarding principles, stakeholder consultation and engagement, SDG requirements, and a compliant monitoring plan. For the projects that belong to a pre-defined activity group, the pre-defined requirements should be applied. Otherwise, a project should apply for approval on how it meets the Gold standard's general requirements, subject to expert peer review. As the objective of the protocol is pre-defined, it is not suitable for other purposes rather than judging the sustainability of projects.

With regard to SDG requirements, the project needs to prove that it contributes positively to at least three SDGs. Here, impacts are defined as differences on a chosen indicator, with and without the project. SDG impacts should be calculated quantitative by one of the three options: 1) use official SDG indicators and methodology; 2) follow a Gold standard-approved SDG tool; 3) follow a Gold standard-approved methodology. Although the methodology for assessing impacts is left to the user, the choices are limited to the three options listed above, each of which has clear guidance. Still a non-expert may find it challenging to identify which indicator and method to choose.

The impacts considered

The Gold standard requires a positive contribution to at least three SDGs, one of which must be SDG 13, climate action. In addition to the official SDG indicator and assessment methodologies, several Gold standard methodologies are provided to assess e.g. GHG emissions reduction, Averted Disability Adjusted Life Years (aDALYs), soil organic carbon, and water resources management-related benefits. However, as only three SDGs need to be covered, it is the users' choice to decide which SDGs to assess in addition to climate change. This may lead to the bias of choice on the SDGs that the project can easily contribute to (as opposed to those that may be most relevant to the project). The protocol also offers safeguard principles, where issues such as human rights, gender equality, anti-corruption and stakeholder engagement are addressed. This guarantees that negative impacts on those issues will be monitored. But there may be other SDGs or sustainable development impacts that the project has negatively impacts on, that will be neglected in the assessment.

Requirements on verification and third-party validation

To obtain project design certification, the project design and impact assessment need to be validated by an authorized third party, and reviewed by Gold Standard Technical Advisory

Committee and NGO supporters. To obtain project certification, in addition to the content mentioned above, a monitoring plan needs to be created and followed, where the reports need to be verified. The SDG impacts also need to be validated and verified by an authorized third party. These guarantee the reliability of the assessment results.

Consideration of technical details

The protocol has a clear definition and guidance on baseline and alternative scenario. A double counting guideline was developed under Gold standard for land use & forests, and energy & waste projects. The consideration of supply chain is encouraged, but not mandatorily required in the protocol. Uncertainty analysis is not required.

Communication and reporting

The Gold standard is widely acknowledged under Clean Development Mechanism (CDM), where the carbon credits arising from CDM projects can be certified or verified using this protocol. Therefore it has been widely used and recognized by climate project developers, as well as NGOs and governments. But the recognition of the protocol in private sectors outside of climate projects are limited. In recent updates, Gold standard links its assessment with contributions to SDGs, which facilitates the use of the protocol outside of climate projects.

Showcase examples are available, as well as training programs via webinars and workshops. These help the users to better understand the protocol. An online tool is not available yet, but is currently under development, with the aim of helping the users identify the relevant SDGs to be included in the assessment. Contact points in various countries are also not available yet. When in-house capability is lacking, the company or project owner may choose to use consultants for carrying out the assessment.

Summary and recommendations

Table 7 Pros and Cons summary of Gold Standard

| | Pros | Cons |
|-------------------------|--|--|
| The application context | The protocol can be used for assessing climate action projects regardless of the location and sector of the company. | It is only applicable to climate actions that are carried out in the format of projects. Projects that are associated with geo-engineering or energy generated from fossil fuel or nuclear, fossil fuel switch, or any project that supports, enhances or prolongs such energy generation are excluded from the scope of application. |

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| <p>The assessment approaches</p> | <p>The protocol defines clear objectives. It includes qualitative assessment on the safeguard principle, as well as quantitative assessment on SDG impacts. The choices of SDGs impact assessment methods are limited to 3 options, all of which has clear guidance.</p> | <p>Objective of the assessment is already pre-defined. Therefore the protocol has limited applications for other purpose rather than assessing the sustainable development impacts of a project.</p> <p>As the protocol gives flexibility on the choice of SDGs, assessment approaches and data collection, the users will find it challenging to make the choices and perform the analysis without expert knowledge.</p> |
| <p>The impacts considered</p> | <p>The assessment includes safeguard principles that guarantees no negative impacts on issues such as human rights, gender equality, anti-corruption and stakeholder engagement. It also requires quantitative assessment for at least 3 SDGs, including climate change, to show its positive contributions.</p> | <p>The assessment is limited to three SDGs impacts, up to the users' choices. This leads to the bias in choices, in favor of the SDGs that the project can positively contribute to, but neglecting the ones that the project has a negative impact on.</p> |
| <p>Requirements on verification and third-party validation</p> | <p>Verification and third-party validation are required for the certification of project.</p> | |
| <p>Consideration of technical details</p> | <p>The protocol has a clear definition and guidance on baseline scenario and ex-ante scenario. A guidance for the avoidance of double counting is also available.</p> | <p>The consideration of supply chain is not mandatory, that may lead to the ignorance of some major impacts arising from the supply chains. Uncertainty is not required in the protocol.</p> |
| <p>Communication and reporting</p> | <p>The impacts are linked with SDGs.</p> <p>Examples are provided.</p> <p>Webinars and workshops are available.</p> | <p>The recognition of the protocol is not high in private sector.</p> <p>It does not provide any software to help the users identifying or assessing impacts.</p> <p>There is no contact point in various</p> |

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| | | countries yet. |
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The biggest challenges that users will face when applying Gold standard are as follows: choosing the 3 SDGs and proper indicators, finding the assessment approach, and collecting the data to carry out the assessment. Gold Standard provides detailed guidance to help users overcome these challenges. The upcoming online SDG impact assessment tool may help to further simplify the process of choosing the SDGs. However, it still requires expert knowledge to identify the indicators, assessment approaches and data collection to carry out the assessment.

When using the Gold standard to assess sustainable development impacts of a climate action, it is suggested that the users look beyond the SDGs where the project can make a positive contribution, but also consider where the project may have negative impacts on. Although the safeguard principles guarantee that some risks are managed, each project should also address the relevant and significant negative impacts that it may have outside of the safeguard themes. Although not required, it is highly recommended to include the supply chain in the system boundary of the assessment, as well as carrying out an uncertainty analysis to justify the robustness of the result.

3.6. SAM Corporate Sustainability Assessment (CSA)

The SAM-CSA results, formerly known as the SAM ESG Scores, is one of the most recognized sustainability assessments products in the investment community. The result is used to select the constituents of the Dow Jones Sustainability indices.

The application context

SAM-CSA is an annual assessment of company sustainability practices. The results are used by thousands of asset investors to inform investment decisions. It is designed for large companies, to understand sustainability practices at the company level. Therefore, climate actions in large company can be assessed under this protocol, regardless of location and sector. A limitation of the protocol is that it can only assess climate actions that shall have an impact on the indicators it considers.

The assessment approaches

The objective of SAM-CSA assessment is already pre-defined as described above. The system boundary is also defined by the financial reporting boundary. To derive the result, an assessment is first carried out by questionnaires. Each question is accompanied by additional information on the structure of the question, definition used and relevant references (e.g. indicators, measurement methodology and sources of information) to help answer the question. The answers to the questionnaires are further weighed by a weighting scheme, to derive the final score. The weighting scheme is defined by the financial materiality in a given industry.

The questionnaires are industry-specific, where the assessment is well in line with industry standards such as CDP and GRI. As the weighting scheme allocates a weighting score to each

question, users are encouraged to respond to all questions. Therefore, companies do not have many choices on the metrics and assessment approaches. Such limited flexibility means that it is easy for companies to carry out the assessment, in that few choices are left to the user.

The impacts considered

SAM-CSA covers a wide range of impacts, including economic, social and environmental. There are some impacts that are generally applicable to all industries, as well as some that are targeting specific industries. As the users do not have the freedom to include more metrics (impacts), the coverage is considered limited and not inclusive. Occasionally, this may lead to instances in which the significant and relevant sustainable development impacts of a company are not covered in the assessment. The weighting score on every impact ensures that companies will not easily omit any impacts in the list. This works as a safeguard system to guarantee that the important impacts are covered in the assessment.

Requirements on verification and third-party validation

SAM-CSA verifies the result by crosschecking with publicly available information. Assessments are validated through independent third-parties.

Consideration of technical details

The protocol only requires reporting on the absolute values or status of the metrics, rather than the changes on metrics over a time period. Therefore, baseline and alternative scenarios are not used. Supply chain is covered in the assessment, focusing on management aspects, e.g. whether suppliers have their own code of conduct, and whether there is a process for identifying risks in supplier chain. Avoidance of double counting and uncertainty is not described.

Communication and reporting

SAM-CSA is well-known in the private sector, as ~3500 large companies use this protocol annually to report on their sustainable development impacts. Though some questions are aligned with the SDGs, the protocol does not provide a direct link between the assessment result and the SDGs. SAM-CSA has developed a web-based software for the entire assessment process. Examples of assessment are provided in the document, as illustrations. Webinars are available for users to get familiar with the assessment process. SAM-CSA also offers a helpline (through both e-mail and phone) to clear up questions. Workshops and national-level contact points are not available yet.

Summary and recommendations

Table 8 Pros and Cons summary of SAM-CSA

| | Pros | Cons |
|-------------------------|---|---|
| The application context | It is possible to use the protocol to assess the climate actions impacts on | The protocol is mainly applicable for large |

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| | company level, regards of location and sector of the company. | companies. Only when the climate action has an impact on the indicators reported in the scheme, the protocol can be applied. |
| The assessment approaches | The protocol has a clear objective. It provides sufficient information on the questions, metrics, and approaches for reporting the metrics. The metrics and assessment approaches are pre-defined, with very limited flexibility. Therefore, the users will find it easy to follow the instructions, without much choices to be made. | Objective of the assessment is already pre-defined. Therefore, the protocol has limited applications for other purpose rather than assessing the sustainable development performance of a company. |
| The impacts considered | The protocol covers a wide range of impacts, including social, environmental and economic ones. The weighting score on every impact ensures that the majority of the listed impacts will be covered in the assessment. | The coverage of impacts is by no means inclusive. As the users do not have the flexibility to add more impacts, this may lead to the circumstances where the companies significant and relevant impacts may be not be covered. |
| Requirements on verification and third-party validation | Verification and validation are required. | |
| Consideration of technical details | The consideration of supply chain management is included in the metrics. | Baseline and ex-ante scenario are not discussed. There is no guidance on how to perform uncertainty analysis and avoid double-counting. |
| Communication and reporting | Well-known in the private sector. Examples are provided in the document as illustration. | There is no contact points in various countries. There is no off-line workshops or training courses yet. |

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| | <p>Webinars and helplines are available.</p> <p>Online-tool is available to carry out the assessment.</p> | |
|--|---|--|

SAM-CSA is a powerful protocol for reporting on companies’ sustainable development impacts. However, when using this protocol to assess the sustainable development impacts arising from climate actions in companies, the possibilities are rather limited, unless the climate action associated with the company’s operations has as its main impacts issues that are covered by the protocol. Considering that the coverage of impacts is neither inclusive nor flexible, it is not possible to guarantee that all relevant and significant impacts arising from the climate action will be covered using this protocol. The advantage of using SAM-CSA is that the metrics are well in line with the well-known industry standards. With fixed metrics and assessment approaches, it will not be a big challenge for the large companies to carry out the assessment. However, SMEs may still face challenges, notably with regard to data collection.

4. Recommendations and conclusions

In this report, we have reviewed a selection of protocols that can be used to assess the sustainable development impacts of climate actions by companies. Through this review, we identify the pros and cons of these protocols, from the point of view of application by private sector actors wishing to report on the sustainable development impacts of their operations.

Recommendations for company users

There are three protocols that are originally designed for reporting and communicating company sustainable development to the public or investors, namely GRI series, SASB standards and SAM-CSA. These protocols all have a set of pre-defined metrics (impacts) that are fall within the target audiences’ interests. They are also suitable to identify whether a company may want to consider undertaking a climate action, in light of the expectation of the target audiences. When applied to assess the sustainable development impacts of climate actions, these protocols are only suitable to the actions that are consistent with the pre-defined impacts named above. In addition, all three protocols cover a limited set of impacts. This means that not all relevant and significant impacts arising from the climate action will be reflected in the assessment results. However, these protocols are well recognized by private sector actors, who in some instance have already established processes for reporting sustainable development issues via these protocols. Therefore it may be more feasible for companies to use these protocols. Doing so would require companies to take the following steps:

1. **Define the purpose of assessment.** Is it to assess few chosen impacts according to

investors' interests, significance, relevance, etc., or to assess a wider range of impacts wherever possible? Is it for internal use, public reporting, or marketing? How much resources are available? These needs to be well discussed among key stakeholders.

2. **Properly define the climate action and system boundaries**, in accordance with, or adapted from, the protocol requirements.
3. **Identify the impacts and assessment approaches**. As the impacts stated in these protocols are rather limited, companies should also look for other impacts according to the purpose defined in the first step. This may be very challenging for non-experts. If needed, external consultants can be brought in for help.
4. **Data collection and integration**. This can be very challenging, especially for SMEs that do not have sufficient resources and data to draw from.
5. **Reporting and communication**. The reporting can be arranged according to the protocols, bearing in mind to answer the questions defined in step 1.

In addition, there are three protocols that are originally designed to assess sustainable development impacts of projects or companies, namely ICAT-SD, SMART and Gold standard. All of them have a lower recognition in the private sector, comparing to the three reporting protocols mentioned before. Similar to the reporting protocols, Gold standard recommends to report impacts only on three chosen issues including climate change. Users should also follow the five steps listed above, with special attention to the identification of impacts. If the purpose defined in step 1 is looking beyond three impacts, users should further identify the extra impacts.

ICAT-SD provides a flexible framework that allows users to identify all relevant impacts. It is suitable for assessing a wide variety of climate actions that exist in the format of e.g. projects and policies. However, the flexibility also means higher requirements on the users' experts. Users should also follow the five steps listed above, but with special attention on the identification of impacts and choices of assessment approaches, as they vary case by case without standard options in ICAT-SD. This may be time consuming and challenging. In addition, the language, terms, key concepts and examples in ICAT-SD are public policy oriented. Company users shall need some translations to properly understand it within the business context.

SMART provides a comprehensive set of impacts and assessment approaches that do not require choices. Users may find it easy to follow the steps. The challenge is that the assessment approaches are rather new and comprehensive. Its feasibility is upon test in case studies. We recommend users to wait for the update after the case studies.

Best practice recommendations

For supporting company users assessing sustainable development impacts of climate actions, the ideal protocol should have a good balance between the complexity of the process and the comprehensiveness of the result. GRI series, SASB Standards, Gold Standard and SAM-CSA require less complexity in the assessment process, due to the limited amount of sustainable development impacts to be assessed. Meanwhile, the comprehensiveness of the result is also limited, as not all significant and relevant impacts arising from the companies' climate action shall be covered. In comparison, ICAT and SMART provide more complex assessment processes that require good expert knowledge to make the choices and carry out the study. However, the result is also more comprehensive that all potential positive and negative impacts should be revealed.

We recommend companies to follow the assessment steps provided in ICAT-SD framework. ICAT-SD gives flexibility to identify the goal of assessment that can suits most types of climate actions. The qualitative assessment step in ICAT-SD works as a screening process to help users identify all relevant and significant impacts. However, due to the limited guidance provided in ICAT-SD on identifying those impacts, we recommend users to follow other protocols for this step, especially considering impacts listed in GRI series, SASB Standards, SAM-CSA and SMART. Afterwards, the identified impacts shall be assessed quantitatively to give comprehensive results. Similarly, ICAT-SD does not provide sufficient guidance on how and which method to use for this step. Users are recommended to use approaches provided in GRI series and SAM-CSA wherever relevant. It is also recommended to search for approaches in relevant databases such as the SDG Compass business tools, and ICAT database of sustainable development tools and resources. In terms of reporting and communication, the report in GRI series “addressing investor needs in business reporting on the SDGs” provides good guidance that should be followed. Moreover, company should always involve key stakeholders, especially top management and possibly sustainability managers in early stages to secure the support needed to carry out the assessment. We recommend to use stakeholder participation guidance from ICAT project as good practice.

Annex 1 Assessment criteria for shortlist protocols

- Is the protocol designed to be used by companies or projects?

To judge whether the protocol may suit the purpose of assessing climate actions in private sector, it is important to know what is the original purpose the protocol is designed for, e.g. designed for assessing companies performance, or for assessing projects that include climate actions, or for assessing national policies.

- Is it applicable in company?

In addition to the intention of design, the applicability of the protocol may vary. As climate action can exist in various forms in the company, the protocol of good practice should be able to assess general activities in various companies with minor adaptations.

- Is the protocol generic, or sector-specific?

This is to identify if the protocol is originally designed to be applicable in specific sectors. In those cases, it may require some adaptation before the protocol can be used in other types of companies.

- Was the protocol designed for national/subnational, entire companies, or individual plants/projects?

Considering the aim is to assess impacts arising from climate actions in private sector, it is most relevant if the protocol is designed for individual projects or companies. In some cases the protocols developed for national or subnational level can also be applied for assessing impacts on project and company level, but may need some minor adaptations. By identifying the original design purpose, this criterion help the users better understand the protocol applications.

- What are the assessment steps in the protocol?

The protocols adopt different approaches to carry out the assessment. Here the approaches are listed in detail to give an overview.

- Does the protocol draw on another protocol, such as the GRI's?

Many protocols do not develop assessment methods on its own, but refer to other protocols for reference. By identifying the protocols that have been referred to, the most commonly used ones may be revealed.

- Does the protocol outline how it compares with other protocols?

This reveals whether the protocol is self-aware of its link with other protocols.

- What are the sustainable development impacts considered in the protocol?

Sustainable development covers a wide range of impacts, which are often categories into three pillars:

environment, social and economy. Protocol with good practice should be able to cover all relevant and significant impacts from all three pillars, to avoid burden shifting from one to another.

- **Does the protocol include a verification component?**

By verification, the assessment result can be evaluated against the requirements in the protocol, thus guarantee the quality.

- **Does the protocol provide guidance on third party validation/assurance?**

Validation is the process that ensures the information used in the assessment and the result is appropriate. Validation from a third party will enhance the credibility of the assessment result.

- **Does the protocol include guidance on how to develop baselines?**

- **Does the protocol offer guides on ex-ante and ex-post sustainable development impact assessment?**

In some protocols, sustainable development impacts are defined as the effects on a sustainable development situation, caused by external interventions such as activities, policies, and actions. The sustainable development situation is often monitored by indicator. Therefore the sustainable development impacts are assessed as the difference on indicator metrics with and without the external intervention (e.g. increase of X kg SO_x emission due do an activity). The baseline scenario is the one without intervention. The scenario with intervention can be in the past time period (ex-ante) or future time period (ex-post). The protocol of good practice should provide guidance on such practices.

- **Does the protocol consider impacts in supply-chain?**

- **Does the protocol consider potential double-counting?**

The sustainable development impacts are associated with a defined system. The system may only cover onsite activities, or also include activities involved in the supply chains. To properly assess all impacts, the protocols should encourage to consider the supply-chain wherever relevant. When the defined system is consisted of several sub-systems (e.g. supply chains), it is necessary to separate them clearly, so that the impacts are not double counted. The guidance on such practices should be included in the protocol.

- **Does the protocol include guidance about how to assess uncertainty?**

Assessment results are always uncertain, due to variations in nature. The protocol should provide guidance on the disclosure of uncertainty information to the users.

- **Is the protocol widely known (as measured by the number of internet hits)?**

This is measured by counting the number of google results using the protocol name as the search words. The assumption is that the more google result is available, the more well-known the protocol is.

- **Has the protocol been used by Latin American companies?**

Considering the targeting audience of this document is Latin American companies, it is important to know the existing applications of the protocol in the Latin American companies. The information is obtained by searching the protocol website and in search engines by using the protocol name and few Latin American country names as key words.

- **Is the protocol relevant for SDG goals?**

The SDGs are well known by the public. By linking the protocol with SDGs, it will facilitate the communication to the public and policers. This criterion assesses if the protocol has established the link to SDGs.

- **Does the protocol provide user-friendly software, in addition to the guidance?**

Though not required, but a user-friendly software with good instructions will help the user to better use the protocol in the proper way, thus recommended to have alongside the protocol.

- **Does the protocol include advice with regard to showcasing example reporting to company stakeholders and the wider public?**

Examples help users understand how to use the protocol properly. It can be examples illustrations in the protocol, or case study that is publicly available.

- **Does the protocol have a contact point in country /region?**

- **Does the protocol provide training programs?**

By having contact point in the country or organizing training program, expert guidance can be provided for applying the protocol. This is always useful and sometimes essential for the users to properly use the protocol.