



Benchmarking of Sustainability Standards used in Cotton Production

HELPING STANDARD USERS BETTER UNDERSTAND THE STRENGTHS AND LIMITATIONS OF SELECT
COTTON STANDARDS IN COVERING SPECIFIC SUSTAINABILITY ISSUES



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Cotton is the most widely produced natural fiber, and millions of people across the globe rely on cotton for their livelihoods. However, the conventional methods of producing cotton can have a detrimental impact on both the environment and human health. For over 15 years, voluntary cotton sustainability standards (VSS) and certification programmes have been developed to reduce these negative impacts, and they are an important tool to drive action towards a more sustainable and equitable cotton sector. However, it is important to note that all cotton production standards have both strengths and weaknesses, and are not meant to address all the challenges within the cotton sector.

WWF conducted a benchmarking exercise in 2022 to better understand the strengths and limitations in the coverage of key sustainability issues by six standards commonly used in cotton production. The standards benchmarked in this exercise are: [Better Cotton Initiative](#) (BCI - Small, Medium and Large Farm criteria), [Cotton Made in Africa](#) (CMiA), [FairTrade International Small Producer Organization Standard with Fiber Crop Criteria](#), [USDA National Organic Program](#), [EU Organic Program](#), and [India National Program for Organic Production](#). Other standards applicable to cotton production exist but were not within the scope of this exercise.

The objective of sharing these results is not to assess or make a judgment about which standards are better or worse, “more sustainable” or “less sustainable” – such conclusions are impossible from this exercise - but rather to provide users of standards with a more nuanced understanding of their utility as tools in addressing sustainability issues.

The following are some overarching conclusions that have come from the exercise:

1. **No standard is perfect.** Standards cover certain benchmark criteria well and not others. In other words, not one of the standards that were benchmarked covered all the sustainability criteria selected for this exercise.
2. **There’s always room for improvement.** Even where a standard has good coverage of a sustainability issue, there is always room to strengthen the criteria.
3. **Different standards focus on / address different needs and issues:** Standards differ from one another in the sustainability issues that they cover; some standards cover specific sustainability issues both better and worse than other standards.
4. **Good coverage of a sustainability issue is not everything.** The quality of implementation matters a great deal.

Some key implications of these conclusions are:

Certification to a standard does not equate to sustainability.¹ Standards are a means of pursuing sustainability objectives and differ from one another in their scopes, approaches and quality of implementation. One size does not fit all!

Understand how to use standards as a tool for sustainability. It is important for users (e.g., consumers, brands and retailers, etc.) of standards to recognize each standard's strengths and limitations towards addressing specific sustainability objectives.

Support standards to become more robust and effective. Standards should continuously seek to improve and should be supported by their users to become more robust and effective.

Use of standards should be complemented by other tools and approaches. Standards alone are insufficient for achieving sectoral transformation towards sustainability. Other approaches, tools and actors have critical and complementary roles to play.



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¹ <https://www.iisd.org/system/files/2021-12/ssi-initiatives-review-standards-poverty-reduction.pdf> (page vii)

KEEPING STANDARDS IN PERSPECTIVE

Sustainability is a broad concept, often encompassing different dimensions like social, economic and environmental aspects. It is important to understand that there are differences in how the six standard programmes are designed and the sustainability outcomes they are created to achieve. Put another way, each standard addresses different sustainability challenges. When considering the value of one or more specific sustainability programmes, one should keep in mind the following:

Scope of standards: Some standards focus on cotton only while others are not commodity specific. Some are aimed at addressing certain sustainability dimensions (e.g., social, environmental or economic) of “sustainability” while others are more general. Some are national standards (applicable in only one country, e.g., India Organic), while others are global standards (used in many countries, e.g., BCI, FairTrade).

Standards are not necessarily mutually exclusive: The standards assessed in this report have been considered in isolation from one another. However, some can be “layered” so that a commodity could be certified to more than one standard at a time (e.g., FairTrade Organic, CMiA Organic).

Maturity of programme: This refers to how “new” or “developed” the programme is. Newer standards may still be focused on “getting up and running” and have not had the time to track or demonstrate outcomes/impacts, while those standards that have been around longer may have well developed criteria and systems in place.

Theory vs. practice: Standards define minimum criteria or expectations that adopters must meet in order to be certified to that standard. There is an assumption (theory of change) that fulfilling certain criteria will lead to desired outcomes. However, those outcomes in practice are very much dependent on the quality of the implementation (e.g., does the farmer use the correct trap crop for the pest he is trying to manage) as well as the validity of the assumptions in a specific context. Thus, assessing the extent and rigor of a standard’s coverage of important issues is one aspect of understanding the strengths and weaknesses of the standards, but it is also necessary to look for evidence of performance outcomes to better analyze a standard’s overall strengths and weaknesses.

Non-certified does not always equal “bad” or “unsustainable”: Some farmers may be certified to a standard but not implement certain good agricultural practices because, for example, the standard may not strictly require it or because they may be trying to cut corners (if the standard does require it). Meanwhile, some farmers may not be certified to a standard, yet implement the same or better agricultural practices than a certified farmer. Some farmers might choose not to seek certification for various reasons, including a lack of economic incentive (i.e., benefits of certification do not outweigh the high administrative and financial costs that are often associated with certification), a lack of information about certification, a lack of implementation capacity, or poor enabling conditions (e.g., financing, choice of inputs, regulatory support), among other factors. Standards and certifications provide some degree of assurance and set of minimum expectations, but this does not mean non-certified is “bad”. While uncertified farmers can perhaps match or exceed the performance of certified farmers, without the degree of scrutiny or assurance that standards are expected to provide, companies and consumers cannot be certain that their claims have been independently verified.

Reality is an integrated whole: Reality is complex and the nature of analysis is to simplify the real world by separating it into smaller pieces that are easier to understand. In this exercise, we are trying to understand the degree to which standards address sustainability by breaking the concept of sustainability down into separate parts - social, environmental and economic dimensions, each with its own sub-parts like freshwater, biodiversity, climate etc. – and seeing how the standards address each aspect. However, there are clear and dynamic interlinkages between the parts, for example between soil health and water quality, or biodiversity and climate, or all four of those issues etc. Thus, a statement like standard X’s criteria covers land management practices well but does not explicitly cover water quality practices well does not mean that there are no water quality benefits to implementation of that standard.



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RESULTS

Guide to reading and interpreting the bar charts that follow:

The percentages along the Y-axes in the bar charts show the percentage of the benchmark criteria for each theme/category (X-axis) that are fully covered and partially covered by the criteria of each standard (or an aggregate of standards). The difference between 100% and the percentages of fully covered and partially covered benchmark criteria for each sustainability category gives you the percentage of the benchmark criteria in that category that are not addressed at all by the certification scheme.

For example, in Figure 1 below, if we consider all the certifications included in this exercise together and the extent to which they address desirable agrochemical practices and outcomes (according to our benchmark criteria), their criteria fully cover (i.e. fully address) just over 45% of benchmark criteria under the agrochemical category, and partially cover (i.e. partially address) just under 25% of the benchmark criteria under the agrochemical category. In other words, about 70% of the benchmark criteria under the agrochemical category are addressed to some extent, and about 30% of the benchmark criteria are not addressed at all.

As another example, you could look at Figure 3 and use the following interpretive structure: “[Scheme A] fully covers X% of the benchmark criteria for [S theme] and partially covers Y% of the benchmark criteria for [S theme]. It does not cover [100-X-Y]% of the benchmark criteria for [S theme].” So, in Figure 3, looking at BCI Small Farm’s criteria on worker’s rights compared to the benchmark criteria on worker’s rights, you would say: “BCI Small Farm standard fully covers 20% of the benchmark criteria for worker’s rights, and partially covers 20% of benchmark criteria for worker’s rights. In other words, BCI Small Farm Standard does not include 60% of the benchmark criteria categorized under worker’s rights.”

It is important to note that this exercise is only trying to understand the degree to which certain important sustainability topics/issues/themes (defined by the choice of the benchmark criteria) are addressed explicitly by the language and requirements of each benchmarked certification (as included in their publicly available certification documents).

Figure 1 below aggregates the coverage of all the benchmarked standards by sustainability theme. When thinking about all the benchmarked standards together, some of the areas with the weakest coverage of benchmarked criteria are in water, climate change, gender and working conditions. Some of the areas with the most coverage of benchmarked criteria are in agrochemicals, soil, and forced and child labour.

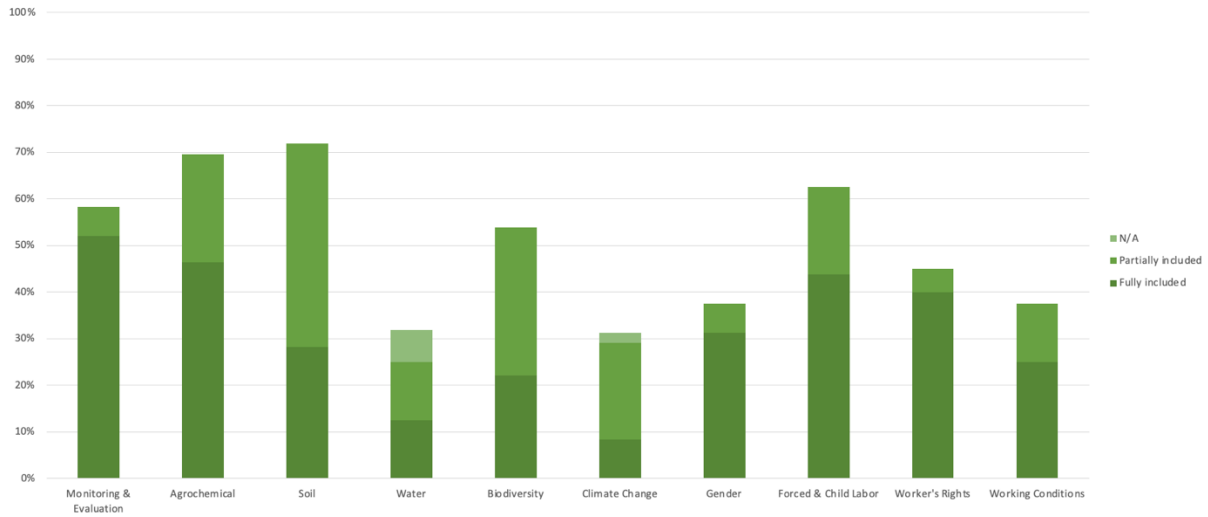


Figure 1. Coverage of benchmark criteria by sustainability theme, aggregated across all benchmarked standard schemes.

If we exclude the coverage assessments of the Organic schemes (see Figure 2), which by design have a narrow scope (i.e., were mainly created to address agrochemical usage in crop production), M&E, forced and child labour, and worker's rights have the highest coverage of the benchmarked criteria. The rest of the themes range between 60% and 65% average coverage, with water and climate change still having the least coverage. This suggests that there are still important areas that are missing coverage by many of the non-Organic schemes.

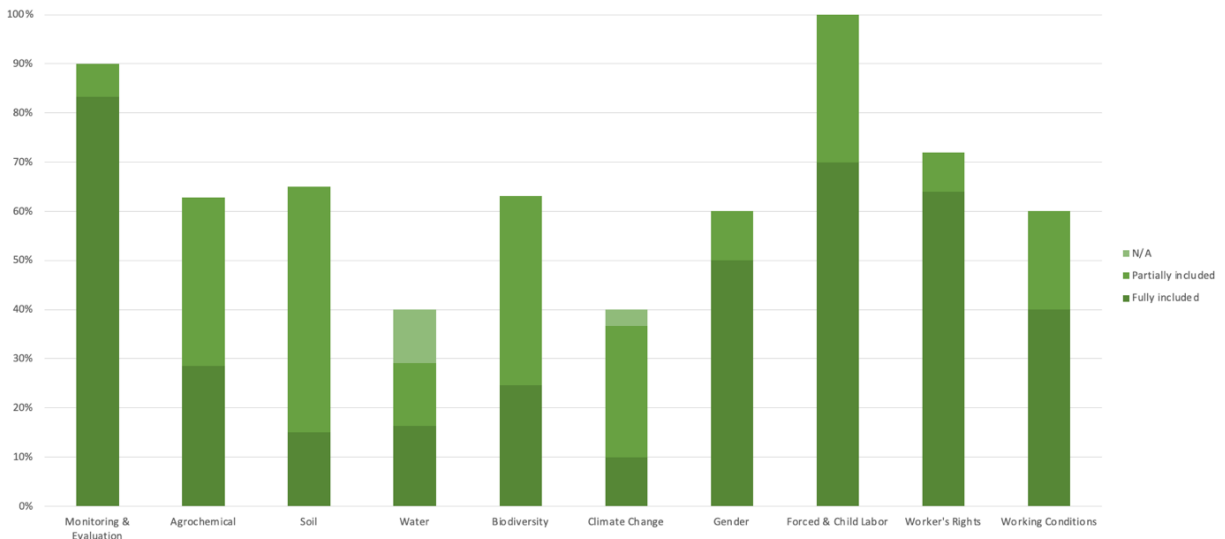


Figure 2. Coverage of benchmark criteria by sustainability theme, aggregated across all non-Organic standard schemes.

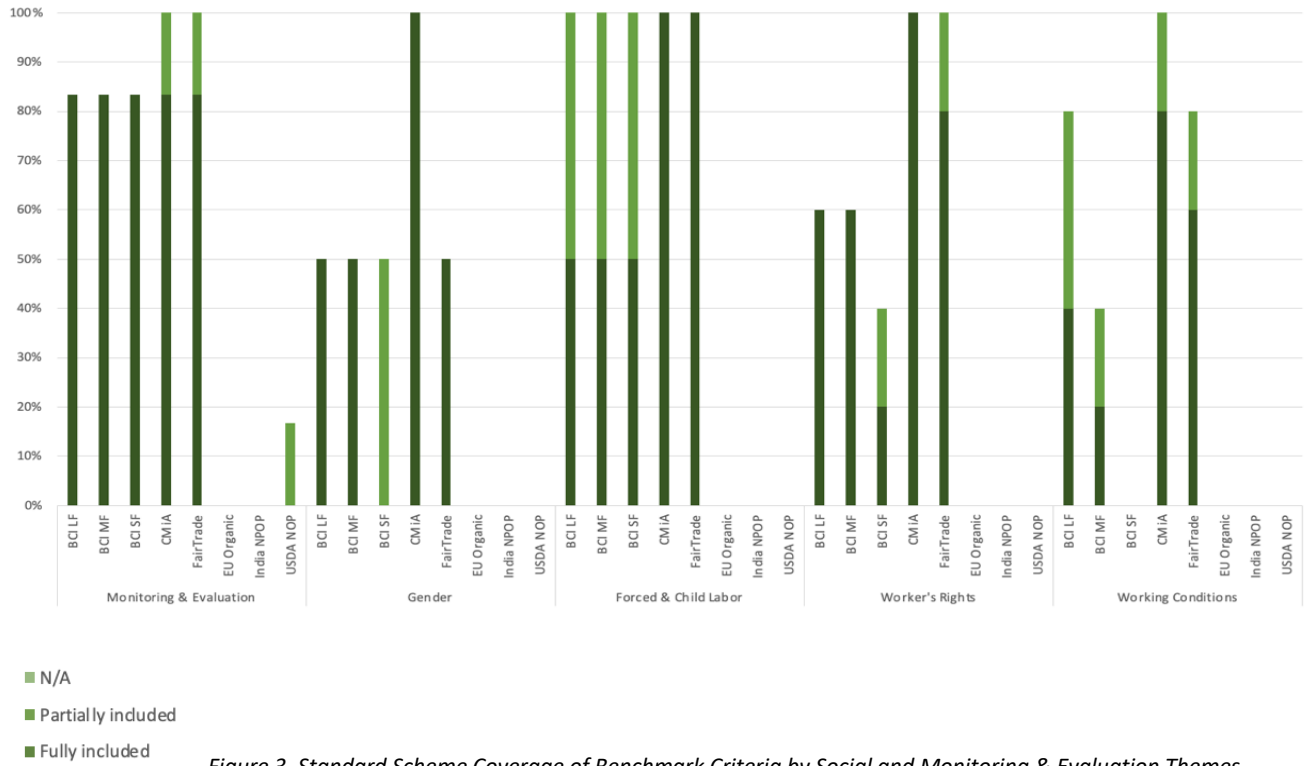


Figure 3. Standard Scheme Coverage of Benchmark Criteria by Social and Monitoring & Evaluation Themes.

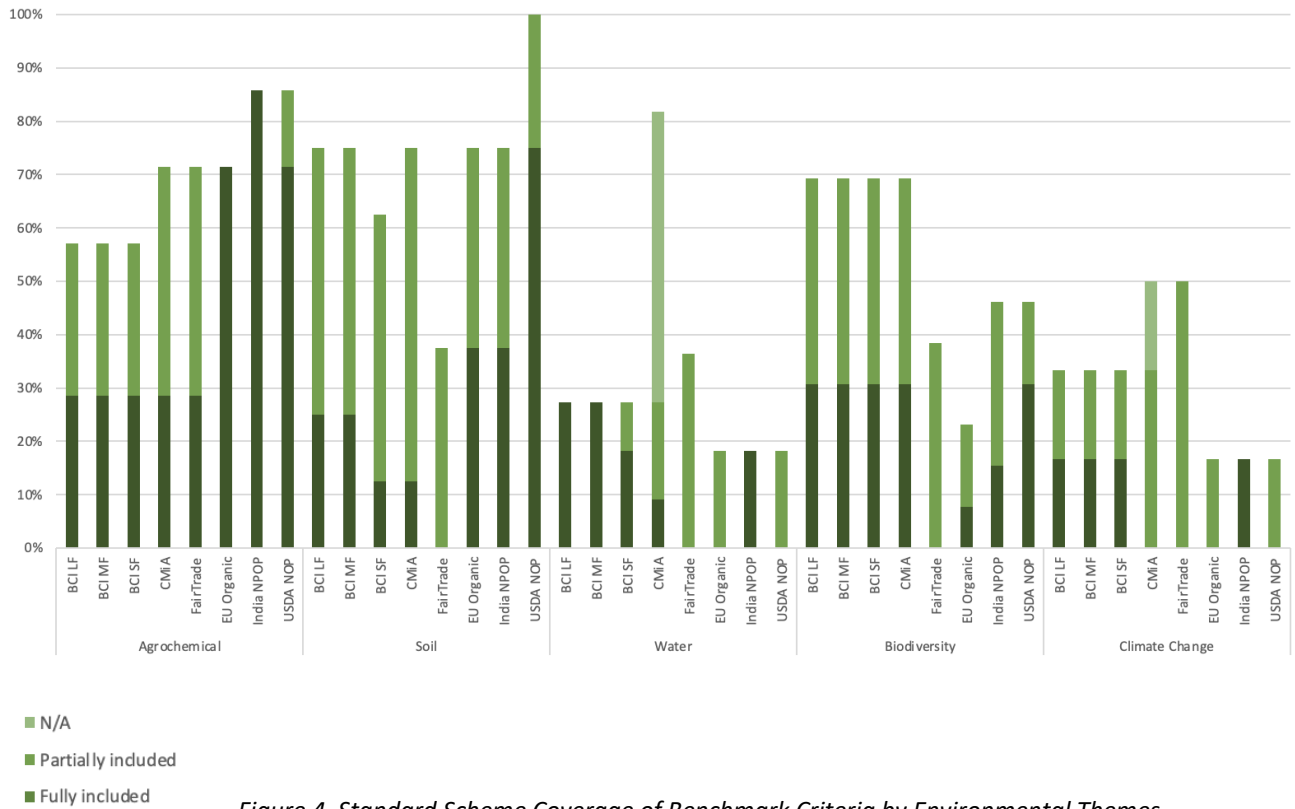


Figure 4. Standard Scheme Coverage of Benchmark Criteria by Environmental Themes.

Figures 3 and 4 show that Organic schemes overall have the lowest total coverage of benchmark criteria. They have little to no coverage of M&E, water, biodiversity and climate change criteria. They have no coverage of social criteria: gender, forced and child labour, workers' rights and working conditions. Where they have the best coverage, and often exceed the other benchmarked standards, is on agrochemicals. They are often on par with the other standards on soil criteria.

CMiA has the greatest total coverage of benchmarked criteria. It exceeds all the other benchmarked criteria on water, which is driven primarily by the fact that CMiA does not allow the use of irrigated water. It has some coverage of all the benchmark social criteria - something which none of the other benchmarked standards do. The theme with the weakest coverage within CMiA is climate change, where more could be done to support producers in addressing current and future climate change scenarios and impacts.

FairTrade covers a similar number of total criteria to BCI although it does better than BCI on themes like M&E, workers' rights and working conditions, while doing similarly on agrochemicals, water, climate change, gender and forced and child labour, and doing worse on soil and biodiversity. Overall, soil, water and biodiversity are the themes with the weakest coverage within FairTrade.

BCI has slightly different criteria² depending on the size of the farm operation. Differences in coverage between farm size show up in soil, workers' rights and, with the greatest variation, in working conditions. In each of these three themes, small farms have weaker coverage than medium and large farms, due to the anticipated differences in capacity of small farmers and the materiality of certain issues to their operations. However, it should be noted that CMiA and FairTrade are also used by small farmers and are being assessed on the same benchmarking criteria. Looking across the benchmarked schemes, BCI (along with CMiA) stands out for their coverage of biodiversity criteria. BCI also has good coverage of soil and forced and child labour criteria. BCI large farm requirements cover working condition criteria well, but this is not the case for BCI medium and small farm requirements. BCI also has fairly good coverage of M&E requirements, roughly similar to CMiA and FairTrade. The areas with the weakest coverage within BCI are water, climate change and, in the case of medium and small farm requirements, working conditions. There is significant room for strengthening the standard in these areas. Agrochemicals, workers' rights and gender are also themes where BCI could be strengthened in its coverage of important sustainability issues.

Looking at the coverage of criteria by theme, water and climate change have the weakest coverage out of all sustainability themes and is something that all schemes could strengthen. On water use, standards (except CMiA which does not allow use of irrigated water) could have requirements for producers to engage in long term water use planning taking climate change into consideration; collect, monitor and share water use information for better decision making (on farm and at a basin scale); and ensure water use does not compromise environmental flow requirements. On water quality, there should be regular monitoring and quantification of producer impacts on water quality and measures in place to ensure that operations do not contribute to the exceedance of local water quality thresholds.

² * Note: BCI has recently updated its standard criteria P&C v.3.0. It was approved in February 2023 and will come into effect during the 2024/2025 cotton season. The benchmarking exercise did not assess this newer version since it is not in effect yet. More information on this can be found on BCI's [website](#).

On climate change, in addition to the longer-term water use and management planning that factor in climate change, as mentioned above, schemes could do more to help producers monitor Greenhouse Gas emissions and sequestration, adopt renewable energy, and prioritize crops and genotypes that are adapted to local, current, and future climate conditions.



Figure 5. Heat map showing overall coverage of benchmark criteria by sustainability theme and standard scheme.

Figure 5 shows another way to visualize the relative degree of coverage by each standard of each sustainability theme. It is similar to Figures 3 and 4, but without the use of percentages and the breakdown between fully covered and partially covered.

Results of individual standard schemes are shown graphically below:

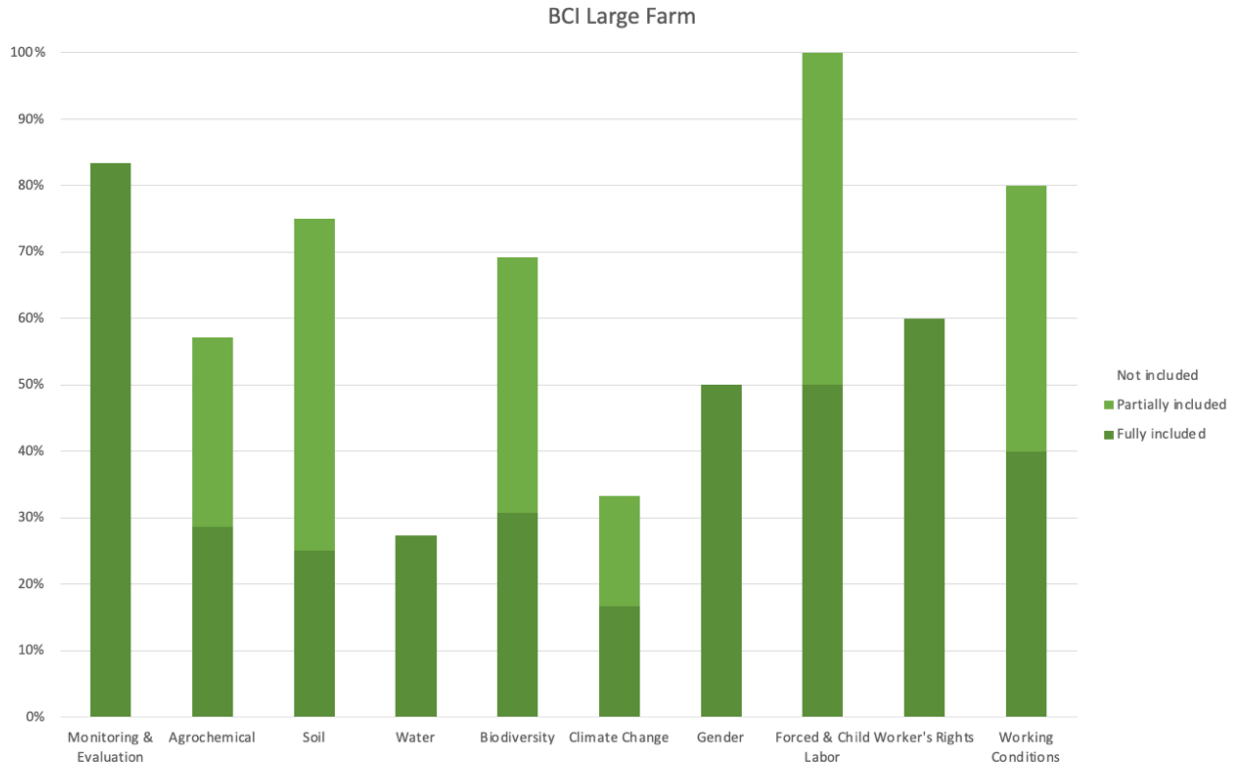


Figure 6. BCI Large Farm standard scheme coverage of benchmark criteria.

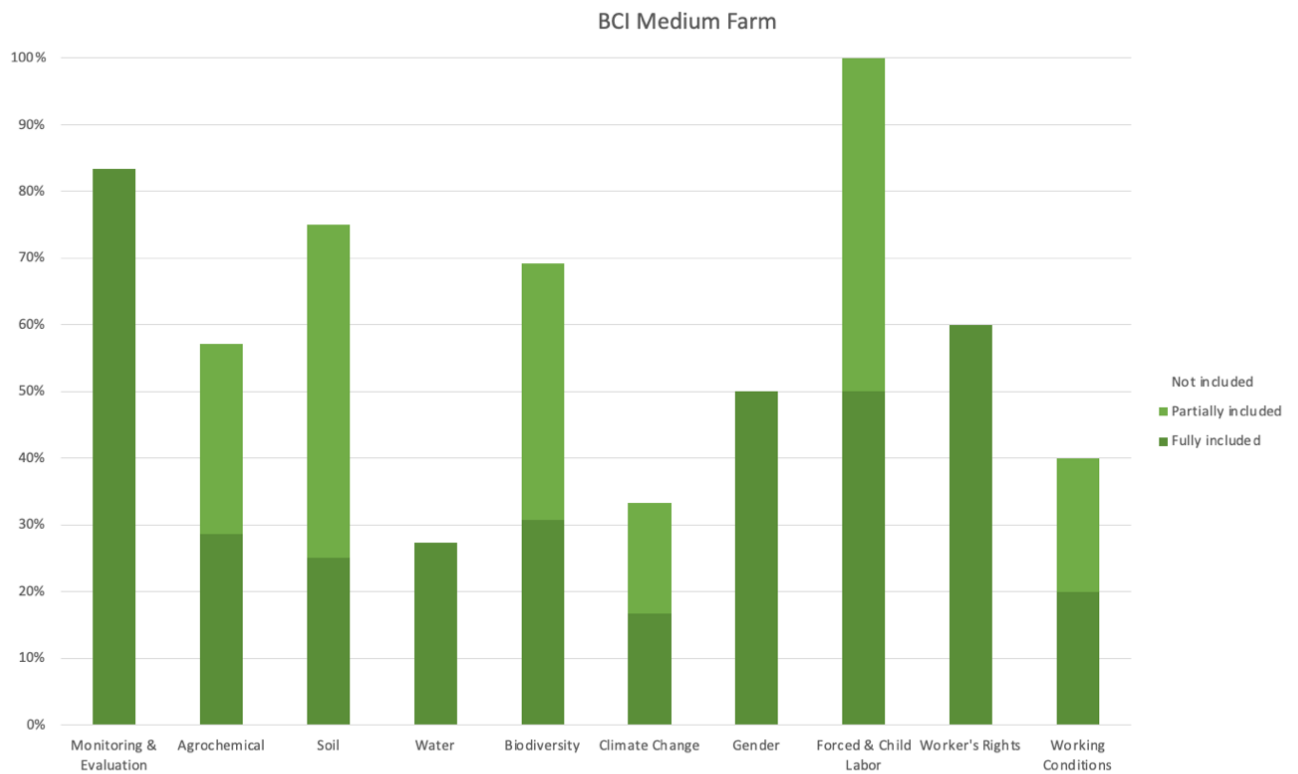


Figure 7. BCI Medium Farm standard scheme coverage of benchmark criteria.

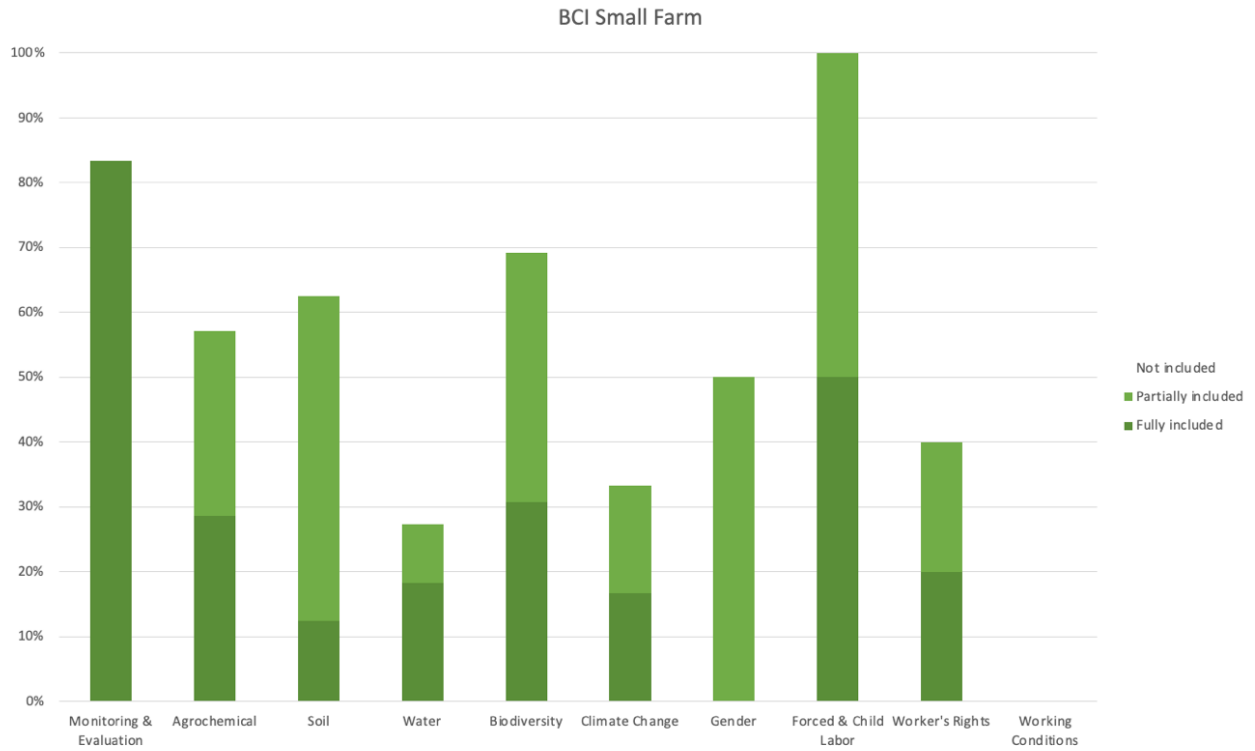


Figure 8. BCI Small Farm standard scheme coverage of benchmark criteria.

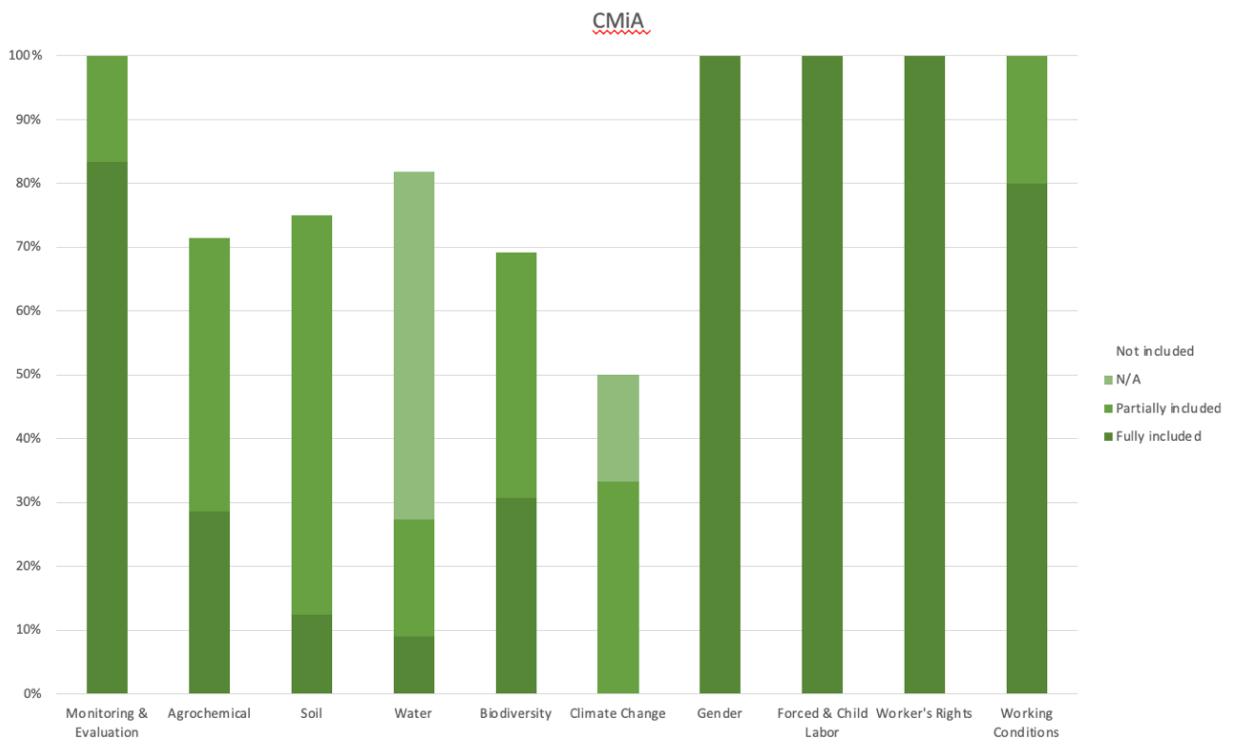


Figure 9. CMiA standard scheme coverage of benchmark criteria.

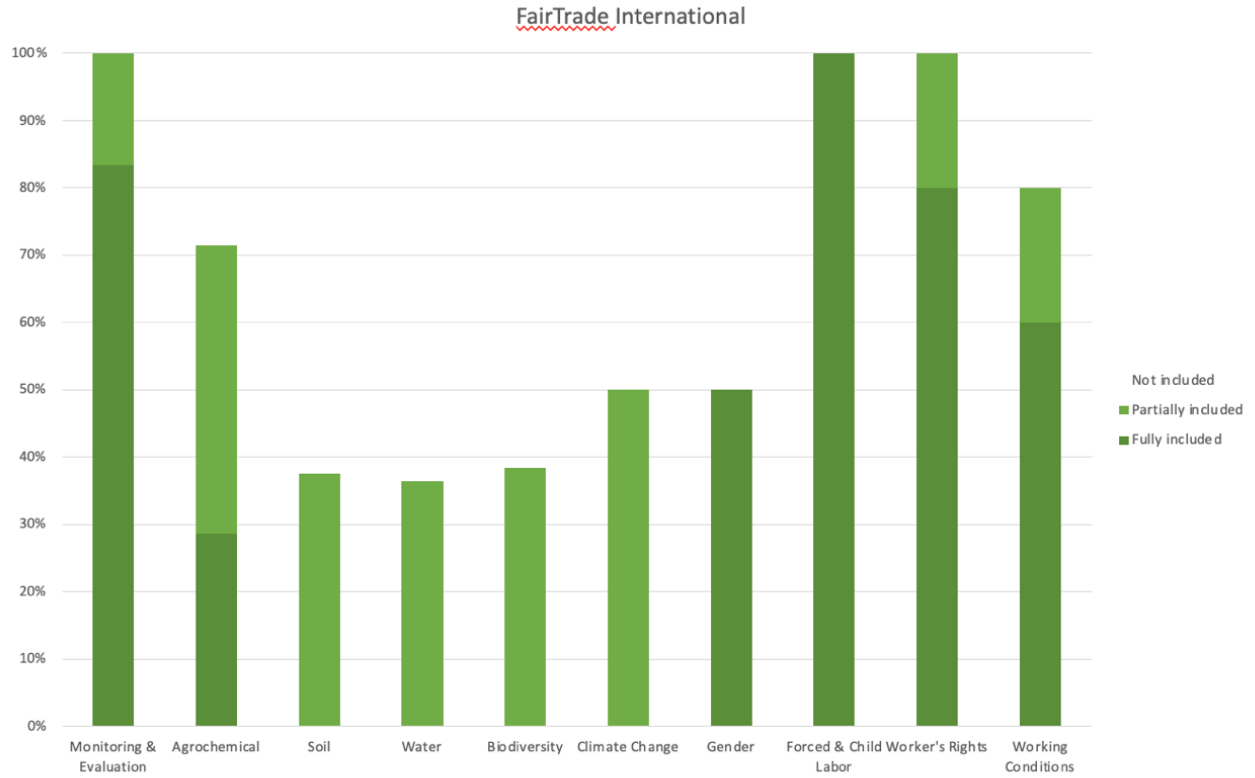


Figure 10. FairTrade International standard scheme coverage of benchmark criteria.

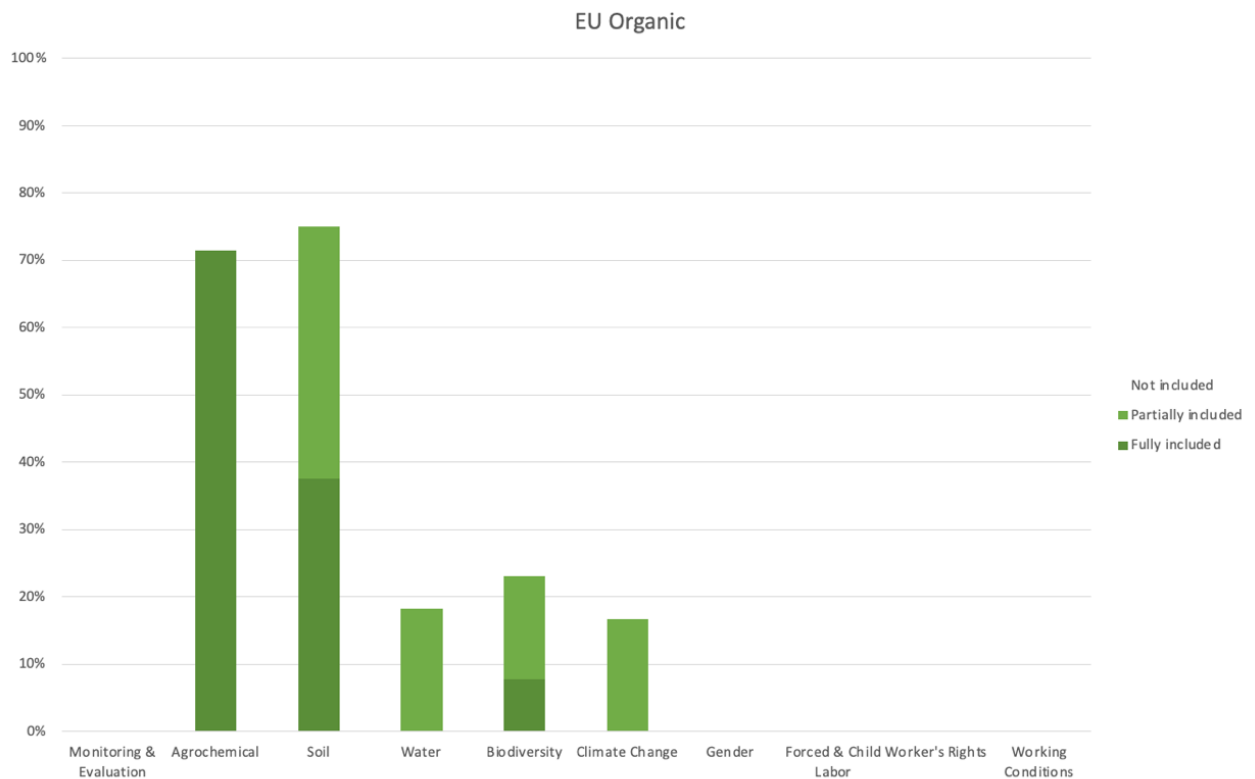


Figure 11. EU Organic standard scheme coverage of benchmark criteria.

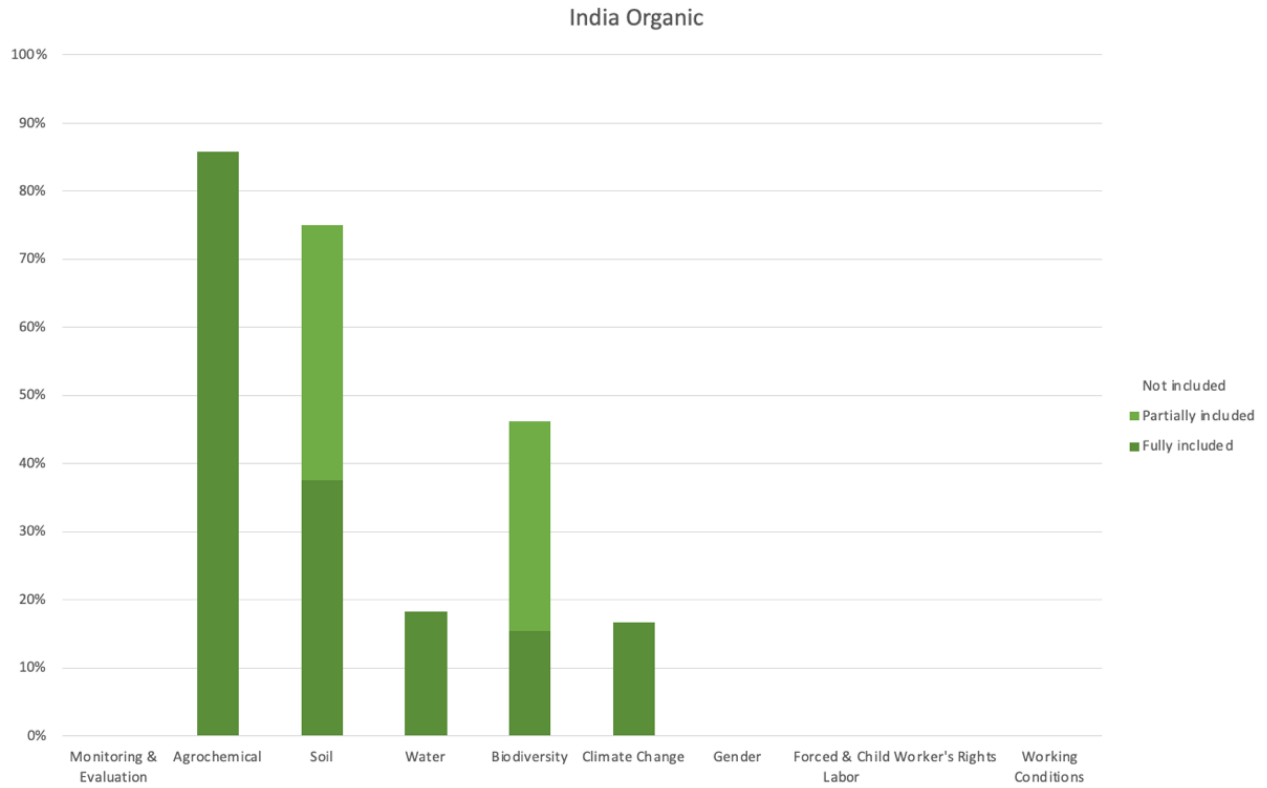


Figure 12. India Organic standard scheme coverage of benchmark criteria.

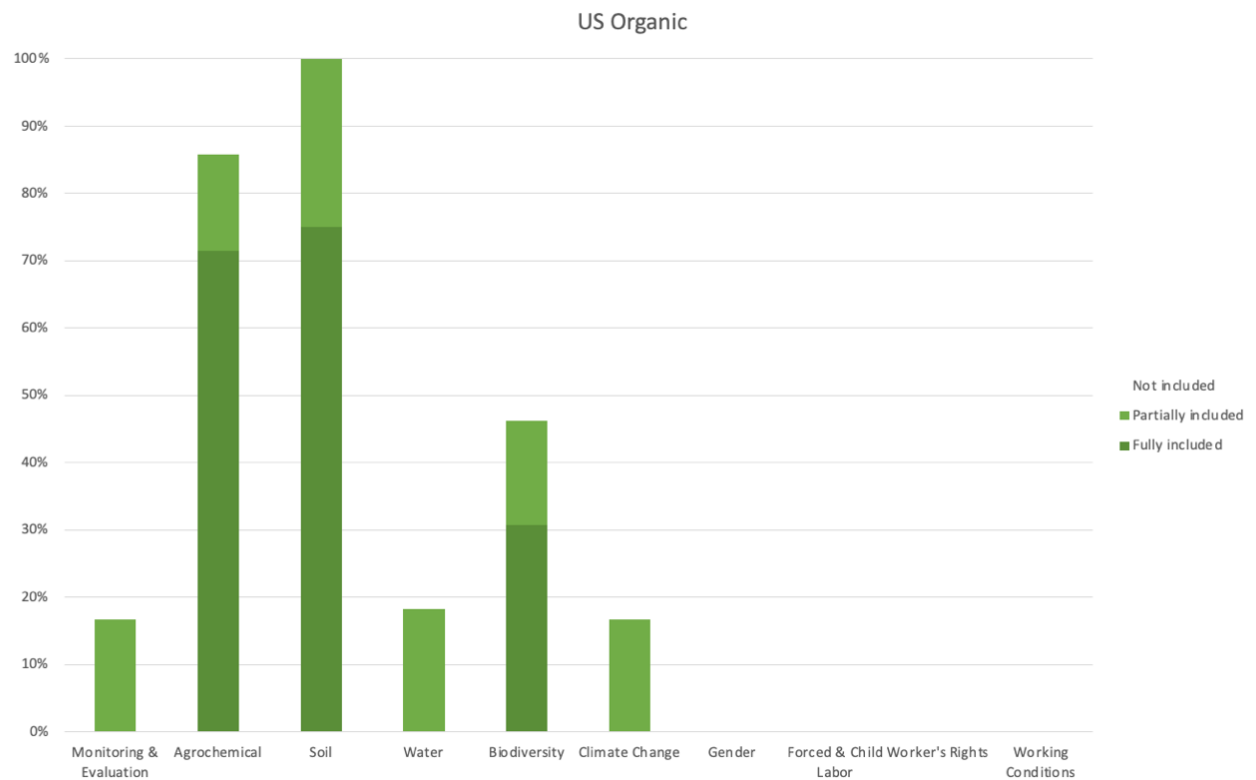


Figure 13. US Organic standard scheme coverage of benchmark criteria.

CONCLUSION

There is an urgent need to address negative environmental and social impacts in the cotton sector, and various tools, including cotton production standards, can be implemented to help improve sustainability. The aim of this analysis was to better understand the strengths and limitations in coverage of key sustainability issues by six significant cotton production standards.

Standards and certifications are important, useful, and potentially convenient tools for improving supply chain sustainability. But they are not the only instrument for achieving sustainability. As our benchmarking exercise reveals, it is important to be aware that standards have different coverages and levels of stringency for various dimensions of sustainability.

Therefore, not all standards will address sustainability issues in the same way or with the same urgency. In other words, different standards may be better than other standards/conventional practices in some areas and worse/the same as other standards/conventional practices in other areas. Moreover, political, cultural and financial conditions also need to be in place to create durable and scalable solutions that achieve broad and sustained impact. Poor governance, corruption, contradictory policies, subsidies and misdirected investments at the global, regional, national or local level can be limiting factors for any value-chain strategy.

For these reasons, it is crucial that sustainability efforts go further than certification to ensure a holistic approach for improving sustainability throughout the entire cotton value chain, from knowing the origins of sourced cotton to investing in smallholder farmers to advocating for producers to receive a living wage. Given knowledge of the strengths and weaknesses of different cotton production standards, standard users can work with standard owners to strengthen the standard schemes and can also employ other interventions to supplement gaps. As a whole, these will deliver the meaningful change required for a more sustainable and resilient cotton sector.



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METHODOLOGY

This benchmarking analysis looked at the following standards:

- BCI (Small, Medium and Large Farm criteria) [version 2.1, 2018]*
- Fairtrade International (Small Producer Organization [version 2.5, 2019] and Fibre Crop criteria [version 1.1, 2011])
- Cotton Made In Africa (CMiA) [Volume 4, Dec. 2020]
- USDA Organic Program [7 CFR 205, 2000]
- EU Organic Program [EU Reg. 2018/848 and 2021 implementing regulations]
- India National Program for Organic Production [Seventh edition, 2014]

This exercise is a snapshot in time of the above benchmarked standards. It is based on publicly available information/documentation for each standard and was evaluated based on an assessor's interpretation and understanding of the available information. It provides an assessment of the standards' requirements against a common set of 65 "good" or "desired" criteria relevant for a land-based sustainable agriculture production standard.

We grouped the 65 criteria into categories (see descriptions below) related to various sustainability themes relevant for the cotton sector (e.g., agrochemicals, water, gender, forced labour, etc.). And we evaluated each standard against each criterion to assess the extent to which the standard exceeded, fully included, partially included or did not include the benchmark criterion. In a few cases, some of the benchmark criteria were assessed as "not applicable" for a given standard due to the context in which the standard is used (e.g., expecting producers to collect water use information in a standard that does not allow the use of irrigated water). Please also see the box with guidance on reading and interpreting the results at the beginning of the "Results" section above for additional insight into what this exercise does and what it produces.

We reached out to all the standard owners to give them an opportunity to verify and provide feedback on the accuracy of our assessment. We received responses from BCI, Aid By Trade Foundation (owner of CMiA), and USDA Agriculture Marketing Service and adjusted our assessment based on our consideration of their feedback. While we did not hear from APEDA, which owns India NPOP, we were able to have a third-party expert familiar with NPOP review our assessment for that standard. Finally, we aggregated the individual results for each benchmark criteria to the level of sustainability theme and present the results here.

The assessment results provide insight into how comprehensively and robustly a standard's criteria cover various important sustainability issues relevant to land-based sustainable production, including cotton. Thus, the results can be interpreted as relative strengths and weaknesses of a standard against the benchmark criteria, as well as the relative strengths and weaknesses among the benchmarked standards. **The results do not, and cannot, say which standards are "good", "sustainable" or "better" than other standards. Answers to such questions require an explicit set of defined values that might vary depending on who is being asked.**

** Note: BCI has recently updated its standard criteria P&C v.3.0. It was approved in February 2023 and will come into effect during the 2024/2025 cotton season. The benchmarking exercise did not assess this newer version since it is not in effect yet. More information on this can be found on BCI's website.*

The benchmark criteria, which were grouped into the sustainability themes below, address some of the following concerns:

Agrochemicals: the implementation of agricultural practices (e.g., crop rotation, organic fertilization, IPM) that allow for the reduction in use of agrochemicals (synthetic fertilizers and pesticides), the avoidance in use of certain hazardous chemicals, and the proper management, use, storage and disposal of agrochemicals.

Soil: the adoption of practices like crop rotation and intercropping that maintain soil health; the prioritization of organic fertilizer use over synthetic fertilizer use; the minimization or avoidance of soil erosion, soil compaction, and soil tillage; the intentional effort to increase soil organic matter; and the mitigation of soil contamination risk.

Water: the minimization of water use and of negative impacts on water quality; the need to measure and monitor water use and water quality in order to manage it; and the importance of engaging other basin stakeholders in collective water management.

Biodiversity: the promotion of biodiversity-friendly agro-ecological and regenerative principles; the practice of planning for and managing operations to avoid negatively impacting biodiversity values, especially sensitive species and areas; avoidance of conversion of natural habitats; the effort to rehabilitate/restore biodiversity values where feasible; the avoidance of the spread of invasive species and of human-wildlife conflict.

Climate change: effort is made to reduce emissions and increase sequestration where feasible; the practice of measuring and monitoring greenhouse gas emissions; and the need to ensure that producers are aware of future potential climate impacts and are preparing for them.

M&E: the importance for a scheme to have a system to monitor, evaluate and report on outcomes and impacts of the program.

Gender: the need to ensure no forms of discrimination are allowed and that adequate conditions exist for female workers to nurture or breastfeed children, or adequate childcare facilities are provided.

Forced and Child Labour: the need to ensure the forced and child labour are not present in the operation.

Worker's Rights: observance and application of international conventions on workers' rights; steps are taken to understand social and occupational risks to workers; the prohibition against abuse; the freedom to associate and collectively bargain.

Working Conditions: access to basic medical care, sanitation and occupational safety is provided; decent living wages are provided; minimum standards for compensation, working hours and leave are in place for workers.

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