



THIS REPORT HAS BEEN  
PRODUCED IN  
COLLABORATION WITH



REPORT

D

2017

Progress Report

# WATER RISK IN AGRICULTURAL SUPPLY CHAINS

How well are sustainability standards covering water stewardship

ISBN 978-3-946211-12-9

<b>Publisher</b>	WWF Germany
<b>Date</b>	October 2017
<b>Lead author</b>	Alexis Morgan (WWF International)
<b>Coordination</b>	Philipp Wagnitz, Johannes Schmiester (WWF Germany)
<b>Contact</b>	Alexis Morgan (WWF International), amorgan@wwfint.org Philipp Wagnitz (WWF Germany), philipp.wagnitz@wwf.de
<b>Layout</b>	Anna Risch
<b>Production</b>	Sven Ortmeier (WWF Germany)
<b>Credits</b>	iofoto (GettyImages), Robert Günther (WWF), Sonja Brüggemann, Nicole Harrington (Unsplash), Phillip Wagnitz (WWF), Levi Morsy (Unsplash), Philip Swinburn (Unsplash)

**Many thanks to the following contributors:** Jörg-Andreas Krüger (WWF Germany); Enrique Uribe (Global GAP); Adrian Sym (AWS); Thomas Köberich (WWF Germany); Katrin Oswald (WWF-Switzerland); Lindsay Bass, Franklin Holley and Alex Bjork (WWF-US); Cotton Made in Africa/ABT Foundation (Alexandra Perschau); Fairtrade (Gelkha Buitrago); Global Organic Textile Standard (Rahul Bhajekar and Sumit Gupta); ISCC (Lydia Pforte); Naturland (Alexander Koch and Martin Weber); Roundtable on Responsible Soy (Jimena Frojan and Daniel Kazimierski); Sustainable Agriculture Network (Oliver Bach); Utz (Britta Wyss, Jefferson Andrade and Lenneke Braam). Finally, we would like to acknowledge the input of various reviewers of this report and its assessment, those involved in its publication, as well as its funders.

This report should be cited as:  
Morgan, A. J. (2017) Water risk in agricultural supply chains: How well are sustainability standards covering water stewardship – A Progress Report, WWF Germany, Berlin.

## Contents

Message from the Chief Conservation Officer of WWF German	4
Message from the Head of Corporate Communications of EDEKA	5
Executive Summary	6
1 Introduction	8
2 Methodology	10
3 Results: reviewing the current coverage of water stewardship	15
3.1 Overall water stewardship coverage	15
3.2 Comparing water stewardship coverage between conventional and organic standards	18
3.3 Comparing the progress in standards that have been updated since 2015	18
4 Discussing solutions and exploring ideas	23
4.1 Part A – Agricultural Sustainability Standard Systems	23
4.2 Part B – Companies with Significant Agricultural Supply Chains	27
5 Conclusion	31
Annex	32
Annex A: Select Best Practice Examples	32
Annex B: Water Stewardship Assessment Framework	34
Annex C1: Coverage of water stewardship elements by select conventional agricultural sustainability standards	40
Annex C2: Coverage of water stewardship elements by select organic agricultural sustainability and other standards	42
List of Abbreviations	43
List of Figures, Tables and Boxes	43
Footnotes	43

## Message from the Chief Conservation Officer of WWF Germany



Identifying major risks linked to sourcing and production is the first step of a responsible supply chain management for any company. For some sectors, water stands on top – and presents a clear business case. In the food retail sector of Germany, every Euro earned consumes around 47 liters of water, followed by apparel retail with around 14 liter per Euro . The link does not astonish, as agriculture accounts for 70% of the worlds freshwater consumption. How dire droughts or floods can impact the bottom line can be seen in high frequency in countries such as Australia, India, Pakistan, Egypt, Morocco, South Africa, Spain, USA, Peru – to name but a few. But does this change?

As global freshwater consumption (and associated challenges) is expected to rise by 40% in the next decades, we should fundamentally question the way we think. As the United Nations Sustainable Development Goals put it, **we need to shift our thinking from increasing water efficiency in agriculture (e.g. “more crop per drop”) to sustainable withdrawals of water within the boundaries of a river basin.** Only then we will be able to address the root causes of the shared water challenges of economies, people, nature and governments that ultimately result in water scarcity, pollution or floods.

Agricultural certification schemes function as major supply chain management tool for retailers and farmers but often still do address the topic reasonably. In 2015 we benchmarked 17 conventional and 4 organic agricultural standards against what we consider comprehensive water criteria for standard systems. Since then much has happened. Systems have adopted more sophisticated water criteria and started open dialogues around the topic. By extending the range of systems analyzed, showing progress actionable pathways, we hope to contribute to a better consideration of shared nature of water in agricultural standard systems.

Jörg-Andreas Krüger  
Chief Conservation Officer  
WWF Germany

## Message from the Head of Corporate Communications of EDEKA



Responsibility and sustainability are well-established values in the way EDEKA is trading. In the long-term strategic partnership with WWF, EDEKA is being advised on a variety of sustainability areas with the objective to reduce EDEKA's ecological footprint, expand its range of more sustainable products and raise consumer awareness for these products as well as sustainable consumer habits.

Population growth, changing global consumption patterns and impacts of climate change are increasing the pressure on the world's freshwater resources with agriculture remaining the world's biggest water user. EDEKA and WWF acknowledge the importance of this issue, assess products' water risks and engage in projects with agricultural producers to reduce these risks. In the future, a leap towards more systemization of these efforts will be made by the establishment of an internal water management system for EDEKA.

In the light of diverse food supply chains, standards can play a key role in fostering a more sustainable water use in agriculture. **Standards are needed that go beyond the farms' fence lines and adopt aspects of water stewardship, i.e. a context and multi-stakeholder perspective.** Therefore, EDEKA is very pleased to support this sequel of 2015's study that shows the standard landscape's recent developments. Our food production depends on the state of the world's freshwater resources – we need to use water more sustainably within and beyond our fence lines.

Rolf Lange,  
Head of Corporate Communications EDEKA AG

## Executive Summary

The world's water challenges are, to a large extent the world's sustainable food production challenges.

Recognizing this, many of the world's largest food,

beverage and retail companies have started to engage their supply chains in an effort to mitigate their biggest water risks. Voluntary agricultural sustainability standards, programs, tools and certification schemes (or agricultural sustainability standards<sup>1</sup> as they will be broadly referred to in this report), which offer consistent, verifiable approaches that can be broadly rolled out with confidence, are one key approach that companies have employed to deliver on sustainable sourcing commitments, including addressing water concerns. However, the degree of coverage on water issues by various agricultural sustainability standards varies considerably. Indeed, traditionally many agricultural sustainability standards have restricted water criteria to efficient use and minimizing both soil erosion and nutrient runoff. As the collective understanding of water stewardship has emerged, there has been a growing appreciation that it takes more than on-site action to adequately mitigate basin and operational water risks.

This report assessed 25 different agricultural sustainability standards and represents a follow up on a report published in 2015. The analysis shows several key conclusions:

- » Of the four water stewardship outcomes, **water quality continues to be the best covered** aspect of water stewardship, followed by water balance, important water-related areas and governance.
- » The most consistently well-covered issues are: **water efficiency, effluent management and legal compliance**
- » Conversely, **participation in water governance, indirect water use assessment, collective action, climate change resilience and aquatic invasive species** remain the most poorly covered issues.
- » The ongoing **lack of coverage of core concepts in water stewardship** (e.g. collective action, water governance and consideration of future water risks) suggests that for most agricultural sustainability standards, there is still a lot of room for improvement.
- » **Organic standards** have comparable coverage in the four water stewardship outcomes in terms of water quality, but generally **have weaker coverage of water balance, water governance and important water-related areas** when compared to conventional agricultural sustainability standards.
- » **Modest, but positive, progress has been made since 2015** in including water stewardship elements in those standards that have been updated.

The overall takeaways for all audiences are: water stewardship integration begins with a deeper understanding of your context and agricultural water risks, be sure you are considering collective actions and engagement in water governance, ensure efficiency requirements are supplemented with cumulative basin impact considerations, and collaborate as much as possible.

Organic standards have weaker coverage compared to conventional agricultural sustainability standards.

Looking ahead, we offer the following recommendations for agricultural sustainability standard systems:

1. Develop supplementary water stewardship guidance and training
2. Integrate water stewardship into standard requirements, including addressing gaps/missing elements, strengthening wording to create more robust requirements<sup>2</sup>, exploring new and progressive concepts, and complementing efficiency measures with cumulative basin impact approaches
3. Enhance standard systems collaboration, via mutual recognition, add-ons, and service provision

Furthermore, for companies with significant agricultural supply chains, we offer the following recommendations:

1. Know your water risk and use credible standards, but make sure the standards you employ are fit for purpose as you seek to mitigate your water risks
2. Accelerate sector collaboration to advance water stewardship in standards
3. Engage and disclose on water stewardship in agriculture

Water stewardship remains a material concern to companies and investors that largely manifests in agricultural supply chains. Without a strong response, communities, nature and business interests all suffer in the long term. The use of agricultural sustainability standards, when accompanied by robust water stewardship requirements, offers a pathway to address this concern. Adopting the recommendations above, we believe that standards can be a powerful mechanism to achieve stronger farming systems for the planet and people alike.



## Introduction

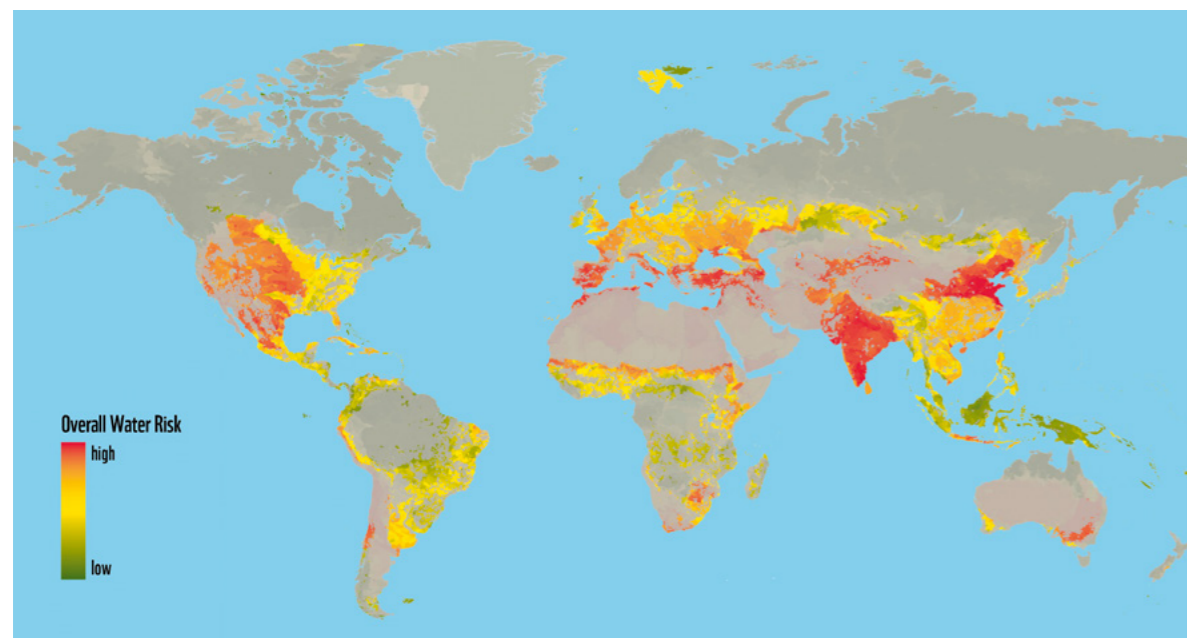
It is well recognized that agriculture accounts for an estimated 70 percent of global water use, and up to 90 percent of global water consumption<sup>3</sup>. Further-

more, the vast majority of the disruptions to global biogeochemical (i.e. nutrient) cycles stem from fertilizer use to increase crop production. The world's water challenges are in large part, the world's sustainable food production challenges. Conversely, so too are the world's crops facing water risks (Figure 1). As companies increasingly recognize the growing water challenges, they have sought to improve the sustainability of their procurement and supply chains. Much of this push has come via "sustainable supply chain" or "sustainable procurement" commitments, in turn enabled through the use of third-party certified sustainability standards. As this happens, it is important to understand the extent to which a given standard covers the various water risks that exist, for example, would use of standard X help to mitigate the physical (e.g. droughts, floods, water quality impacts or dependencies), regulatory (e.g. weak regulation, weak enforcement) or reputational (e.g. water conflicts) risks being faced.

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which people live in harmony with nature. With freshwater species declining at a rate faster than any other<sup>4</sup>, the need to address freshwater conservation through sustainable food systems has never been greater. WWF has had a long history of engagement in sustainability standards for select commodities in an effort to use the power of markets to drive sustainable outcomes. With these elements in mind, WWF published a report in 2015 entitled "Strengthening Water Stewardship in Agricultural Standards."

That report provided an evaluation framework that covered water stewardship aspects across four primary outcome areas. The framework and outcomes were a combination of WWF's Certification Assessment Tool (CAT) and the most widely recognized synthesis of water stewardship thinking, codified into the Alliance for Water Stewardship Standard. The report explored 23 different standards and guidance documents concluded that while areas, such as effluent management, legal compliance, freshwater habitat management and water, sanitation and

**Figure 1:** Global Irrigated Land Facing Water Risk  
Source: WWF Water Risk Filter (<http://waterriskfilter.panda.org/>)



### BOX A: Shifting landscape of certification

Certification can be an expensive proposition for many retailers and producers. Over the years, WWF has heard numerous concerns raised over the cost of certification, especially as standards began to proliferate. Over the past few years, we have noticed a shift by several larger Global 500 companies, including Unilever, Sainsbury's, and others to begin to develop internal supplier codes of conduct that eschew third party multi-stakeholder standard systems in favour of in-house auditing schemes.

As this trend continues, it creates its own challenges. For example, for farmers or other producers who supply multiple clients, having to handle multiple systems is even more burdensome and costly than a single third party standard.

The Sustainability Consortium (TSC) has begun to track, and compile an understanding of how sustainability supplier requirements are emerging, and to understand how these might be consolidated into a more unified "code". No matter what, it will be important to ensure rigorous mechanisms are maintained to ensure strong sustainability performance (i.e. monitoring and evaluation of impacts, independent assurance) remains at the heart of any system.

The report is explicitly not trying to rate which are the "best" or "worst" standards when it comes to water.

hygiene (WASH) were reasonably well covered by many standards, important other concepts such as collective action or action in water governance, climate change resilience, or responding to freshwater invasive species were rarely or poorly addressed. Finally, four key recommendations emerged from the report:

1. Further enhance the integrated water stewardship assessment framework and develop common guidance on water stewardship
2. Encourage standards interoperability with respect to freshwater.
3. Explore opportunities for mutual recognition and collaboration among commodity standards.
4. Steadily continue to strengthen water stewardship related requirements in standards to help mitigate water risks

This report aims at evaluating the progress in various standards over the last two years. Furthermore, the report expands the coverage to an additional 6 standards and also provides guidance to two audiences: (1) standard systems on how to further integrate water stewardship concepts into their systems and (2) companies on how to ensure that the standards they use to address water risks in their agricultural supply chains are fit-for-purpose.

Like the 2015 report, the new report is explicitly not trying to rate which are the "best" or "worst" standards when it comes to water. Every standard has a niche and role to play. Where a commodity (or a given growing region) is at lower water risk, stronger water criteria are likely not a priority and this study backs such distinctions. However, for commodities and regions facing higher water risk, a lack of water stewardship coverage may result in greater losses from water risks (for farmers and their buyers). Therefore the intention is to help standard users (i.e. growers) mitigate water risks, where exposure is an issue. Lastly, it is important to note that this report is not evaluating water impacts (or performance), nor assessing the broader system (e.g. governance, implementation and assurance mechanisms, which can be seen as a proxy for the credibility of a scheme), but rather focuses explicitly on standard requirements related to water.

## Methodology

This report draws upon a similar methodology and framework as the 2015 report. The original report included 23 agricultural sustainability standard systems based on popular use, and the interests of WWF and Edeka.

This 2017 study returned to many of these standards, but opted to drop several and add several new standards. More specifically, this study included an additional five new standards to bolster an understanding of organic standards and cover two other agricultural standards that were not addressed before: USDA Organic (USDAO), Global Organic Textile Standard (GOTS), China Organic Standard GB19630.1-4-2005 (COS), International Sustainability and Carbon Certification (ISCC), Linking Environment and Farming Standard (LEAF)

Conversely, we opted to drop the earlier SAI standards (F&V, SWM, and WS) since they have largely been replaced by the SAI FSA tool, which, while not technically a standard, is used as a benchmarking tool amongst standards. Similarly, the GRSB, which provides principles but not a standard as such (e.g. lacks criteria and indicators) was also dropped. Lastly, it was felt that the Fairtrade Standard for Hired Labour was a better like-for-like comparison than the Standard for Small Producer Organizations, so this has been switched, leaving a total of 25 standards, as follows:



1. **AWS:** Alliance for Water Stewardship – AWS International Water Stewardship Standard, v 2014
2. **ASC:** Aquaculture Stewardship Council – ASC Tilapia Standard: Version 1.0 January 2012
3. **BCI:** Better Cotton Production Principles & Criteria, 2017 Draft, v2
4. **BON:** Bonsucro Production Standard Including Bonsucro EU Production Standard, Version 4.2 December 2016
5. **CmiA:** Cotton made in Africa – Criteria Matrix Version 3.1 - 15.02.2015
6. Fairtrade Standard for Hired Labour, 15.01.2014\_v1.3
7. **GCP:** Global Coffee Platform – GCP\_Doc\_01\_Baseline Common Code\_v2.1\_en
8. **GGAP:** Global.G.A.P. Integrated Farm Assurance – All Farm Base, Crops Base, Fruit and Vegetables, English Version 5.1, July 2017
9. **GOTS:** Global Organic Textile Standard version 5.0
10. **ISCC+:** International Sustainability & Carbon Certification – ISCC PLUS version 3.0 09 February 2016
11. **LEAF:** Linking Environment and Farming – LEAF Marque Standard version 14.1
12. **PT:** The ProTerra Standard – Version 3.0 – Approved Dec 28 2014
13. **RSB:** Roundtable for Sustainable Biomaterials – RSB Principles & Criteria for Sustainable Biofuel Production, RSB-STD-01-001, Version 3.0
14. **RSPO:** Roundtable for Sustainable Palm Oil – RSPO Principles and Criteria for Sustainable Palm Oil Production 2013
15. **RTRS:** Round Table on Sustainable Soy – RTRS Standard for Responsible Soy Production Version 3.1, June 1, 2017
16. **SAI-FSA:** Sustainable Agriculture Initiative – SAI Platform Farm Sustainability Assessment 2.0
17. **SAN:** Sustainable Agriculture Network – SAN-S-SP-1-V1.2 SAN Sustainable Agriculture Standard July 2017
18. **SRP:** Sustainable Rice Platform – Standard on Sustainable Rice Cultivation Version 1.0
19. **Utz:** Utz Core Code of Conduct (Version 1.1, For individual and multi-site certification, 2015) + Coffee Code of Conduct (Version 1.1)
20. **EU-O:** European Organic Regulations (Plant & Livestock – (EC) No 834/2007, 889/2008 & 1235/2008
21. **USDA-O:** USDA Organic Standards
22. **IFOAM:** International Federation of Organic Agriculture Movements – The IFOAM NORMS for Organic Production and Processing Version July 2014
23. **NAT:** Naturland Standards on Production – Version 05/2017
24. **BIO:** Bioland Standards as of November 22, 2016
25. **OFDC-O:** China Organic Standard – OFDC Organic Certification Standards, September 1, 2016

Score and colour code	Grade and description
<b>Score 0</b>	<b>No significant fulfilment of criterion</b> The standard has no explicit elements that would be expected to make a significant contribution to the framework criterion, or elements may be mentioned in an extremely vague way, with no indication that applicants would in practice be expected to take action to address the issue.
<b>Score 1</b>	<b>Limited fulfilment of criterion / indirectly referenced (significant gaps)</b> The standard addresses limited elements of the framework criterion, but also misses out some significant elements; indirectly references or addresses the criterion but without giving enough detail to give confidence of consistent implementation; or, addresses the main elements of the framework but in a way that even in the long term compliance is voluntary.
<b>Score 2</b>	<b>General fulfilment of criterion (limited gaps)</b> The standard explicitly addresses the framework criterion, and includes sufficient detail to give confidence in effective and consistent implementation, but it is still limited in some manner (often not providing water-specific elements). In many cases a score of 2 indicates coverage that could be further improved.
<b>Score 3</b>	<b>Substantive fulfilment of criterion (very limited/no gaps)</b> The standard substantively and comprehensively addresses the framework criterion, often with water-specific references, and includes sufficient detail to give confidence in effective and consistent implementation. A score of 3 often represents a leading example of how to ensure water is explicitly covered, and where improvements could be made to requirements scoring a 3, they tend to be minor adjustments.

**Table 1:** Scoring system for water stewardship coverage

Furthermore, some minor revisions were made to the framework including dropping “water as a priority area” as it was seen as redundant. Furthermore, several areas were merged. These included incorporating the leadership commitment into the adaptive management plan, including water risk assessment with catchment context, and combining ecosystem services with management of habitats. Lastly, the past two years has also seen increasing alignment between the aspects of this framework with WWF’s Certification Assessment Tool (version 4.0).

In general, the assessment employs a liberal interpretation of standards since many standards do not make all criteria mandatory (e.g. a minor/major system, a temporal step-wise approach with increasing requirements in future years, a scoring system with choices, etc.) This means that in some cases standards may not cover water stewardship issues as well as this report denotes, though in theory they could do so.

The 0-3 point scoring system (Table 1) remains the same. The primary aim of the scoring is to denote whether the issue is covered at all (0), whether it is mentioned or alluded to but in a very weak or limited manner (1), covered but either not strongly or not explicitly referencing water (2) or covered well and tied to water (3). Table 2 provides a summary of the different aspects that were evaluated (see Annex B for full details of the assessment framework).

Some cases standards may not cover water stewardship issues, though in theory they could do so.

<b>1.</b>	<b>Water Governance and Management</b>
1.1	Legal Compliance
1.2	Land and Water Rights (Indigenous Peoples’ Rights, Traditional Use Rights, including free, prior and informed consent where applicable)
1.3	Water risk & context I: Consideration of catchment dependencies
1.4	Water risk & context II: Consideration of catchment impacts (Environmental and Social Impact Assessment)
1.5	Adaptive water management plan or policy ideally backed by leadership commitment
1.6	Transparency, Disclosure and Stakeholder Consultation
1.7	Dispute Resolution
1.8	Catchment-level collaboration / Collective Action
1.9	Consideration of Indirect Water Use and supply chain engagement
1.10	Future Scenario & Resilience Planning
1.11	Water, Sanitation and Hygiene for staff
1.12	Catchment governance and policy engagement
<b>2.</b>	<b>Water Balance</b>
2.1	Quantitative water use information (environmental flow, water use, net withdrawal, monitoring)
2.2	Water use efficiency
2.3	Absolute or contextual water quantity limitations (surface and groundwater)
<b>3.</b>	<b>Water Quality Status</b>
3.1	Qualitative water use information (indicators, monitoring)
3.2	Effluent management: fertilizer, pesticides, soil management/ erosion, waste management
3.3	Absolute or contextual water quality limitations
<b>4.</b>	<b>Important Water Related Areas</b>
4.1	Management of Riparian, Wetland and other Water-related Habitat Areas
4.2	Management of Water-related Areas of Religious, Cultural or other Social Importance
4.3	Water-related Land Use Conversion (past and future) and restoration
4.4	Rare, Threatened and Endangered Freshwater Species
4.5	Aquatic invasive species

**Table 2:** Summarized version of the Water Stewardship Assessment Framework

Not all standards have completed a full revision since the publication of the 2015 report. Table 3 outlines the status of the standards in this report as of September 2017 (with revision years noted in brackets).

All standards, regardless of their revision status, were re-scored to ensure consistency and to account for the minor adjustments in the framework. Note that in so doing, a few scores from the 2015 report were adjusted to reflect changes in the framework and interpretation. However, the majority of the adjusted scores reflect changes in the actual standard criteria.

Scores were initially determined by WWF, and then provided to the Standard holders for the opportunity to review and comment before the assessment was finalized.

Updated (Year of last update)	Presently under revision (Last update / Revision year)	Not yet updated / not scheduled
Bioland (2016)	ASC (2012 / 2017)	CMiA (2015 / NA)
Bonsucro (2016)	AWS (2014 / 2017)	Fairtrade (HL) (2014 / 2019)
Global G.A.P.(2017)	BCI* (2014 / 2017)	IFOAM (2014 / NA)
GCP (formerly 4C) (2016)	RSPO (2013 / 2018)	ProTerra (2014 / NA)
GOTS (2017)		
ISCC Plus (2016)		
LEAF (2017)		
Naturland (2017)		
RSB (2017)		
RTRS (2017)		
SAN (2017)		
SRP (2015)		
SAI (FSA) (2015)		
Utz (2015)		

**Table 3:** Standards updates since 2015

\*BCI was an exception as it is near publication and the updated, draft version was used in this assessment. Differences between the agreed upon version may differ from the results presented in this study.

## 3 RESULTS: reviewing the current coverage of water stewardship

### 3.1 Overall water stewardship coverage

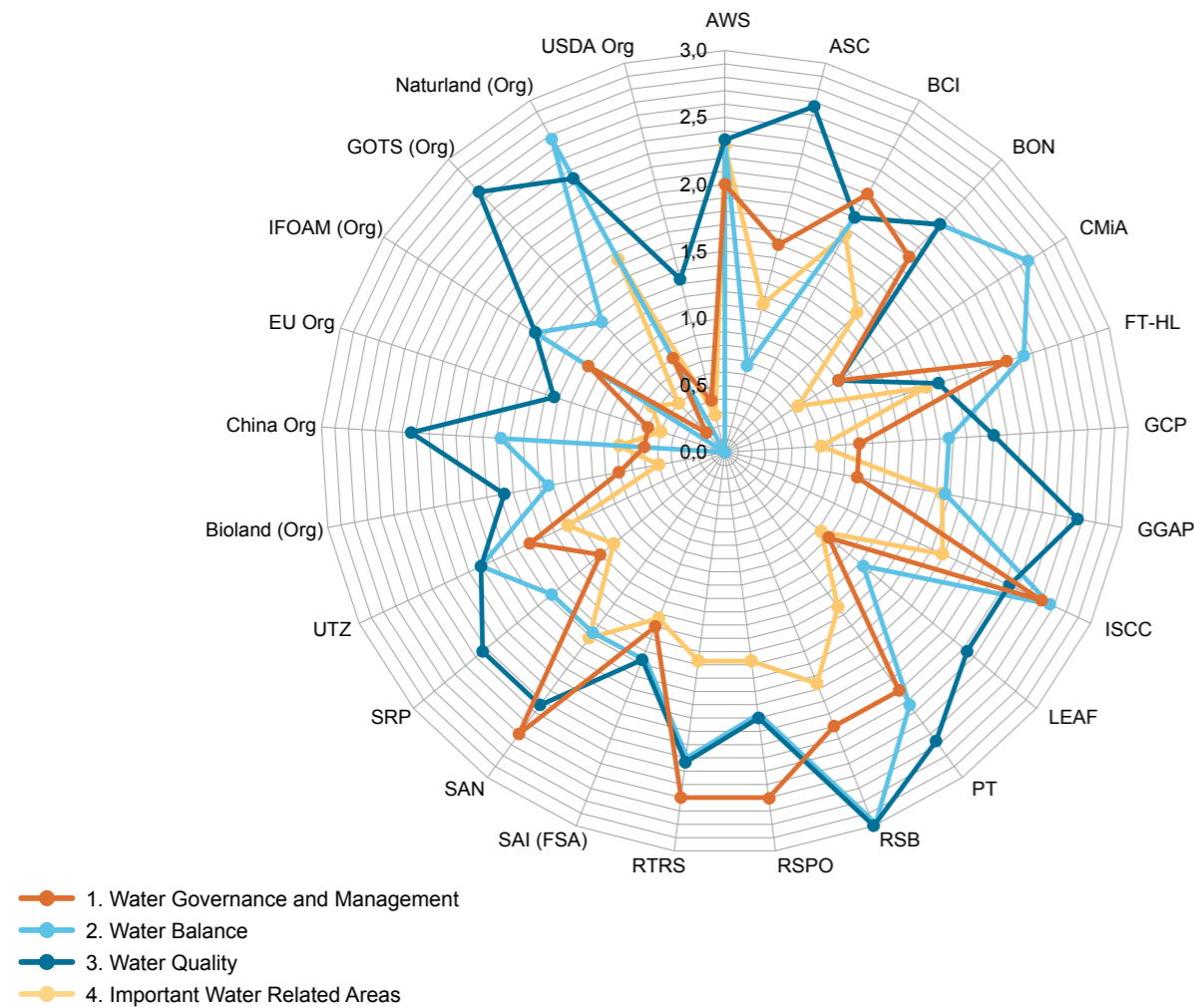
The summarized performance of the standard systems by water stewardship outcome may be seen in Figure 3 below, with the full results available in Annex C1 and C2. The spider diagram is helpful to interpret a number of trends visually (water stewardship coverage is stronger as one moves out from the center), including:

Organic standards score much weaker in water balance, water governance, and important water-related areas.

- A** All of the standards address at least one or more of the water stewardship outcomes
- B** There is a stronger coverage (yellow line, further to the outside) of water quality
- C** There is weaker coverage (red line, closer to the center) associated with water governance and management.
- D** There is a high level of variation in coverage of water stewardship outcomes between standards meaning that certain standards have greater coverage (lines further to the outer perimeter) or lesser coverage (lines closer to the center) than other standards (e.g. RSB as compared to USDA Organic). Of the outcomes, water balance is perhaps the most variable as seen with several systems in which the blue line is located towards the center (e.g. EU Organic, USDA Organic, ASC), indicating weaker coverage, while others (e.g. RSB, Naturland and Bonsucro) have the blue line closer to the perimeter indicating stronger coverage.
- E** There is also a high level of variation in coverage of water stewardship outcomes within most standards (e.g. ASC, Global G.A.P., LEAF), though there are a few that perform quite consistently (e.g. AWS, ISCC Plus). This means that for any given standard, there is often considerable variation in whether it covers any one of the given stewardship outcomes (e.g. GOTS which has reasonably strong coverage of water quality, but weak coverage of water governance).
- F** While the organic standards (top left) tend to score comparably in terms of water quality coverage, but are, in general, weaker in terms of their coverage of water balance, water governance and management, and important water-related areas.
- G** Lastly, for Europe, there is also a notable difference between public organic standard (EU Organic) and the independent organic standards (e.g. Naturland, Bioland).



**Figure 2:** Water Stewardship Coverage by Outcome Across Assessed Standards



Looking at the numbers for the conventional agricultural sustainability standards a bit more deeply (Table 4), as in 2015, water quality continues to have the strongest coverage, followed by water balance, important water-related areas and water governance. Compared to 2015<sup>5</sup>, water governance (any issues listed as 1.x) is covered better, while important water-related areas (4.x) have not substantively changed. What is particularly notable about the average scores across the 18 assessed standards is the very high scores for effluent management (3.2), water use efficiency (2.2), wetland/water ecosystem management (4.1) and legal compliance (1.1). Indeed, these aspects were covered universally (scoring a 2 or a 3 across virtually all standards). Conversely, only two standards had solid coverage (2 or 3) on supply chain (indirect) water use (1.9) and only three standards had solid coverage of water governance engagement (1.12), indicating that these remain very limited aspects of water stewardship in most agricultural sustainability standards.

**Table 4:** Coverage of water stewardship issues in assessed conventional agricultural standards

	2015	2017
<b>Well covered</b>	<ul style="list-style-type: none"> <li>3.2 Water effluent management (2.5)</li> <li>4.1 Management of water-related habitat areas (2.3)</li> <li>2.2 Water use efficiency (2.2)</li> <li>4.3 Water-related land cover conversion &amp; restoration (2.2)</li> <li>1.11 Water, Sanitation &amp; Hygiene (2.1)</li> <li>1.1 Legal compliance (2.1)</li> </ul>	<ul style="list-style-type: none"> <li>3.2 Water effluent management (2.7)</li> <li>1.1 Legal compliance (2.4)</li> <li>2.2 Water use efficiency (2.4)</li> <li>4.1 Management of water-related habitat areas (2.4)</li> <li>1.5 Adaptive water management plan (2.3)</li> <li>1.4 Catchment impacts &amp; ESIA (2.2)</li> <li>3.1 Qualitative water use information (2.2)</li> <li>4.3 Water-related land cover conversion &amp; restoration (2.2)</li> <li>1.11 Water, Sanitation &amp; Hygiene (2.1)</li> </ul>
<b>Poorly covered</b>	<ul style="list-style-type: none"> <li>1.5 Water management plan (1.8)</li> <li>3.1 Qualitative water use information (1.8)</li> <li>4.4 Rare, Threatened &amp; Endangered freshwater species (1.6)</li> <li>1.3 Catchment context (1.6)</li> <li>3.3 Absolute water quality limitations (1.6)</li> <li>1.2 Land and water rights (1.6)</li> <li>2.1 Quantitative water use information (1.6)</li> <li>1.6 Transparency &amp; Stakeholder engagement (1.4)</li> <li>2.3 Absolute quantitative water use limitations (1.4)</li> <li>1.7 Dispute resolution (1.3)</li> <li>4.2 Management of water-related socio-cultural areas (1.3)</li> <li>1.4 Environmental &amp; Social Impact (1.2)</li> </ul>	<ul style="list-style-type: none"> <li>1.2 Land and water rights (1.9)</li> <li>1.3 Catchment dependencies (1.8)</li> <li>2.1 Quantitative water use information (1.8)</li> <li>4.4 Rare, Threatened &amp; Endangered freshwater species (1.7)</li> <li>1.7 Dispute resolution (1.7)</li> <li>1.6 Transparency &amp; Stakeholder engagement (1.6)</li> <li>3.3 Absolute water quality limitations (1.6)</li> <li>2.3 Absolute quantitative water use limitations (1.6)</li> <li>4.2 Management of water-related socio-cultural areas (1.6)</li> <li>1.10 Future scenario and resilience planning (1.2)</li> <li>1.8 Catchment collaboration / collective action (1.2)</li> <li>4.5 Aquatic invasive species (1.2)</li> </ul>
<b>Very poorly covered</b>	<ul style="list-style-type: none"> <li>4.5 Aquatic invasive species (0.9)</li> <li>1.8 Catchment collaboration / collective action (0.9)</li> <li>1.9 Indirect water use assessment (0.8)</li> <li>1.10 Future scenario and resilience planning (0.7)</li> <li>1.12 Participation in catchment governance (0.3)</li> </ul>	<ul style="list-style-type: none"> <li>1.9 Indirect water use assessment (0.8)</li> <li>1.12 Participation in catchment governance (0.8)</li> </ul>

Table 4 also highlights that the majority of water stewardship elements remain poorly covered, including in particular aspects related to climate change resilience, catchment collaboration, and aquatic invasive species.

### 3.2 Comparing water stewardship coverage between conventional and organic standards

One of the intentions of the updated report was to not only provide stronger coverage of various organic standards but also compare the coverage of water stewardship across organic to that of conventional standards. These results are outlined in Table 5, which illustrates that with the exception of water quality coverage, organic standards have significantly weaker coverage of other aspects of water stewardship.

This result is notable as it highlights that organic standards can help to mitigate risks associated with water quality, but are not as likely to address water risks associated with water scarcity, weak regulation, degraded catchments or reputational water risks.

	Conventional Agriculture Standards (N=18)	Organic Standards (N=7)	Differential
1. Water Governance and Management	1.4	0.7	-0.7
2. Water Balance	1.9	1.2	-0.6
3. Water Quality Status	2.1	1.8	-0.3
4. Important Water Related Areas	1.8	0.6	-1.1

Table 5: Summary scores for agricultural sustainability standards by water stewardship outcomes

### 3.3 Comparing the progress in standards that have been updated since 2015

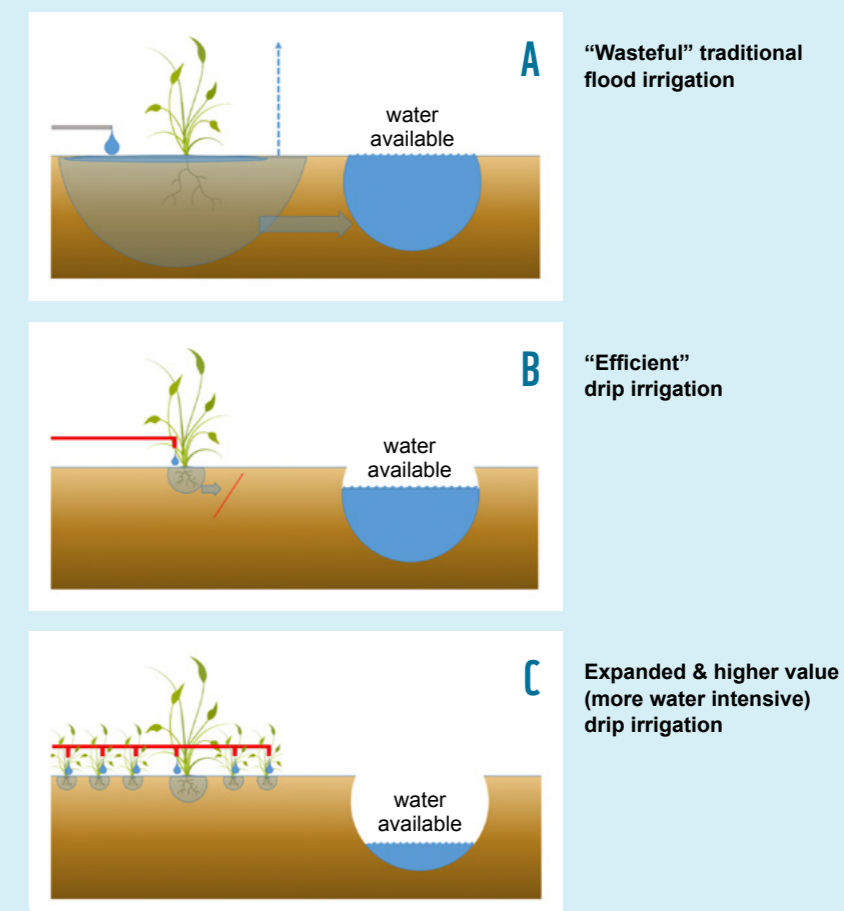
Another rationale of repeating this assessment was to understand how various standards had responded over the past two years to water issues, and the earlier version of the report (Table 6).

Overall, the results show promising improvements. On average there was a 7% improvement in the assessed scores, and there was improvement in crucial areas such as water governance for most systems. There were also notable outliers in both directions. In particular, the Sustainable Rice Platform (which had been assessed in a draft form for the 2015 report) decreased significantly having lost many water-related requirements, including progressive elements tied to collective action and governance engagement. Conversely, the Better Cotton Initiative standard (currently assessed in revised draft form) strengthened considerably showing a nearly 50% improvement in its assessed score.

The change results (Tables 4 and 6) also illustrate an ongoing trend that remains disconcerting: agriculture's push towards "sustainability" continues to focus on "efficiently reducing the bad" rather than respecting planetary boundaries (i.e. context-driven freshwater basin thresholds). Less bad (i.e. more efficient use of nutrients, pesticides, irrigation water), in isolation, will not get us to sustainable water use and more often than not, leads towards a Jevons Paradox (Box B). Furthermore, a reliance upon regulatory permits to ensure sustainable water use has to date largely failed. Efficiency must be complemented by absolute use limits (allocations) that account for cumulative impacts (a point that we return to later in the Discussion section of this report).

On average there was a 7% improvement in the assessed scores.

### BOX B: Irrigation efficiency and the Jevons Paradox



- » **'Classical efficiency'** expresses the ratio of water used by crops (transpiration) to water withdrawn into the irrigation system (from rivers or groundwater).
- » An alternative framing, **'effective efficiency'** focuses on the ratio of crop transpiration to water consumed by the overall irrigation system. This is an important distinction because **most of the water that is withdrawn is returned** through groundwater/baseflow back to the system and downstream users (Figure A).
- » Even experts often judge irrigation by assuming low classical efficiency, failing to realise that water can be returned to the natural system and is not a true 'loss' of water.
- » Thus while situation (A) above might seem wasteful according to classical efficiency, it is also replenishing the river & aquifer. Conversely, (B) does not recharge the river flow, thus dropping the river level. With increased efficiency and profitability, agriculture expands in scope (C), water use and crop type often favouring even more water-intensive crops, and furthering the loss of in-stream flow. The Jevons paradox is therefore that despite ever greater efficiency, the basin faces an ever increasing water scarcity challenge.
- » Accordingly, the continued trend towards water efficiency (without an associated limit on water use) remains of concern to WWF as we seek to ensure that downstream users, including nature, have the water they need to thrive. Efficiency can be a powerful tool to help conservation IF we account for the "saved water" and give it back to people and nature.

Concepts drawn from Lankford et al., in publication.

**Table 6:** Summary scores for agricultural sustainability standards by water stewardship outcomes

	BCI			Naturland			Bonsucro		
	2015	2017	+/-	2015	2017	+/-	2015	2017	+/-
<b>1. Water Governance and Management</b>									
Legal Compliance	2	2	0	1	2	1	3	3	+0
Land and Water Rights	1	3	+2	2	3	+1	2	3	+1
Consideration of catchment dependencies	1	2	+1	2	3	+1	1	1	0
Consideration of catchment impacts (ESIA)	0	3	+3	1	2	+1	2	3	+1
Adaptive water management plan	0	3	+3	2	3	+1	2	2	0
Transparency, Disclosure and Stakeholder Consultation	0	1	+1	0	2	+2	2	2	0
Dispute Resolution	1	1	0	0	0	0	3	3	0
Catchment Collective Action	0	3	+3	1	2	+1	0	0	0
Consideration of Supply Chain (Indirect Water Use)	0	0	0	1	1	0	2	1	-1
Future Scenario & Resilience Planning	0	3	+3	0	2	+2	0	0	0
Water, Sanitation and Hygiene for workers	2	3	+1	2	2	0	2	2	0
Catchment governance and policy engagement	0	2	+2	0	1	+1	0	0	0
<b>2. Water Balance</b>									
Quantitative water use information (monitoring)	2	2	0	2	3	+1	3	2	-1
Water use efficiency	0	3	+3	2	3	+1	2	3	+1
Absolute or contextual water quantity limitations	1	1	0	2	2	0	0	2	+2
<b>3. Water Quality Status</b>									
Qualitative water use information (monitoring)	2	2	0	2	2	0	3	2	-1
Effluent management: fertilizer, pesticides & soil	0	3	+3	1	3	+2	2	3	+1
Absolute or contextual water quality limitations	1	1	0	2	2	0	2	2	0
<b>4. Important Water-related Areas</b>									
Management of wetlands & water-related habitats	2	3	+1	2	2	0	2	2	0
Management of Water-related Areas of Religious, Cultural or other Social Importance	0	2	+2	0	0	0	2	2	0
Water-related Land Use Conversion and restoration	0	3	+3	2	1	-1	2	3	+1
Rare, Threatened and Endangered Freshwater Species	0	3	+3	1	0	-1	2	3	+1
Aquatic invasive species	0	0	0	1	1	0	0	0	0
			<b>34</b>			<b>13</b>			<b>5</b>
			<b>49%</b>			<b>19%</b>			<b>7%</b>

	RTRS			RSB			SAN			GlobalG.A.P.			GCP (4C)			SRP		
	2015	2017	+/-	2015	2017	+/-	2015	2017	+/-	2015	2017	+/-	2015	2017	+/-	2015	2017	+/-
	2	2	0	2	2	0	3	2	-1	2	3	+1	2	2	0	3	2	-1
	2	2	0	3	3	0	2	2	0	1	1	0	1	1	0	2	1	-1
	2	2	0	3	3	0	2	1	-1	2	3	+1	2	1	-1	2	2	0
	2	3	+1	3	3	0	2	3	+1	1	3	+2	0	1	+1	0	2	2
	2	3	+1	3	3	0	3	3	0	3	3	0	0	1	+1	3	2	-1
	2	2	0	3	3	0	2	2	0	1	1	0	1	0	-1	1	1	0
	2	2	0	3	3	0	1	2	+1	2	2	0	0	1	+1	1	0	-1
	1	2	+1	2	3	+1	3	2	-1	1	2	+1	2	0	-2	3	1	-2
	0	0	0	0	0	0	1	1	0	0	1	+1	2	1	-1	0	0	0
	1	1	0	0	0	0	0	3	+3	2	1	-1	0	0	0	3	3	0
	2	2	0	3	2	-1	3	3	0	3	3	+0	2	2	0	3	0	-3
	0	1	+1	0	1	+1	0	0	0	1	0	-1	0	0	0	3	1	-2
	3	2	-1	2	3	+1	2	2	0	3	2	-1	2	1	-1	2	2	0
	2	3	+1	3	3	0	2	2	0	3	2	-1	1	2	+1	2	2	0
	2	2	0	2	3	+1	1	1	0	1	1	+0	2	2	0	2	1	-1
	3	2	-1	3	3	0	3	2	-1	3	3	0	2	2	0	3	2	-1
	2	3	+1	3	3	0	2	3	+1	2	3	+1	2	2	0	2	3	+1
	2	2	0	2	3	+1	2	2	0	2	2	0	2	2	0	2	2	0
	3	3	0	3	3	0	3	3	0	2	2	0	2	2	0	3	1	-2
	2	3	+1	1	1	0	2	2	0	1	1	0	0	0	0	1	0	-1
	3	3	0	3	3	0	3	3	0	2	1	-1	2	1	-1	2	2	+0
	2	2	0	2	2	0	2	2	0	2	1	-1	2	2	0	2	0	-2
	2	2	0	2	2	0	1	3	+2	0	0	0	0	0	0	2	3	+1
			<b>5</b>			<b>4</b>			<b>4</b>			<b>1</b>			<b>-3</b>			<b>-14</b>
			<b>7%</b>			<b>6%</b>			<b>6%</b>			<b>1%</b>			<b>-4%</b>			<b>-20%</b>

In summary, the updated report can draw several conclusions from the analysis of the assessed standards:

- » Of the four water stewardship outcomes, water quality continues to be the best covered aspect of water stewardship, followed by water balance, important water-related areas and governance.
- » For each of the outcomes, the most strongly covered issues, in order, are: effluent management (Water Quality), water efficiency (Water Balance), legal compliance (Water Governance and Management) and management of water-related ecosystems/wetlands (Important Water-Related Areas).
- » Conversely, the most poorly covered issues are largely under Water Governance and Management and include: participation in water governance, indirect water use assessment, collective action, climate change resilience planning and (under Important Water-Related Areas) aquatic invasive species.
- » The ongoing lack of coverage of core concepts in water stewardship (e.g. collective action, water governance and consideration of future water risks) suggests that for most agricultural sustainability standards, there is still a lot of room for improvement.
- » Organic standards have comparable coverage in terms of water quality, but generally have weaker coverage of water balance, water governance and important water-related areas when compared to conventional agricultural sustainability standards.
- » Modest progress has been made since 2015 in including water stewardship in conventional agricultural sustainability standards. Change is possible, as is described in the next chapter.



## 4 Discussing solutions and exploring ideas

### 4.1 Part A: Agricultural Sustainability Standard Systems

Water is the life blood of agriculture. As shared water challenges (supply/demand imbalances, impaired water quality, failing water governance and losses of ecosystem services) grow, producers must better equip for water stewardship. The 2015 report outlined several concepts of how standard systems could begin to explore integration. These are reviewed below and built upon with considerations from this updated report. Furthermore, we have added three additional recommendations based on this updated assessment results.

#### **RECOMMENDATION 1** **Develop supplementary water stewardship guidance and training**

For those systems that do not seek to add more requirements, guidance and training around water stewardship can bridge potential gaps and needs. More specifically we would suggest:

##### **(A) Guidance**

Several standards address water stewardship through more in-depth supplementary guidance. For example, SAI offers guidance on both sustainable water management and on water stewardship. These supplementary standards and guidance documents were found in the 2015 report to enable a potential 40% improvement in requirements over the base SAI standard. Furthermore, RSB provides a guideline on water (RSB Water Assessment Guidelines – RSB-GUI-01-009-01). While voluntary guidance does not ensure stronger performance per se, such guidelines do enable depth and flexibility, while not directly adding to the reporting burden. We also encourage standards to explore use of AWS and/or ISEAL as fora in which to discuss such water stewardship guidance, and ideally adopt aligned terminology, as well as aligned implementation, monitoring and reporting. It is worth noting that such an approach emerged in 2016 with an Integrated Pest Management Coalition between eight different ISEAL member standard systems<sup>6</sup>.

##### **(B) Training**

Several of the assessed standards offer training programs to build water stewardship awareness and capacity. BCI, for example, engages in small-holder farmer-level capacity building that covers how to practically improve water efficiency and pesticide reduction. Such programs are beginning to now explore water stewardship concepts including collective action and strengthening informal water governance. In addition, AWS offers a direct “water stewardship training program”. The program is designed to cover AWS standard and water stewardship concepts more generally. Furthermore, BCI and AWS are beginning to explore how training efforts can be harmonized to benefit both systems, which leads us to the second recommendation.

**RECOMMENDATION 2**  
**Integrate water stewardship into standard requirements**

Building water stewardship requirements into standards is the simplest path to strengthening water stewardship coverage. There are three actions that form the basis for integrating water stewardship aspects directly to agricultural sustainability standards:

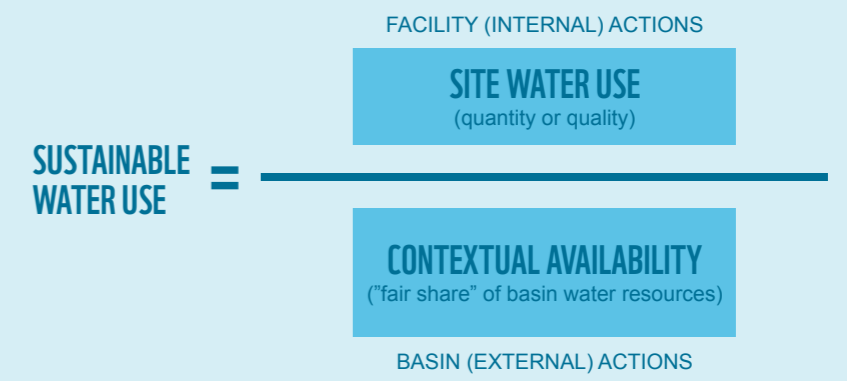
- (A) Addressing gaps and missing elements:** Many of the agricultural sustainability standards assessed in this report lack coverage for a given area (i.e. scored 0 or 1). We believe that these standard systems need to reflect on these gaps, and consider if (and/or how) they might fill these gaps. For example, given its links to water as a human right and SDG 6.1/6.2, provision of WASH is an aspect that should be covered in virtually all standards. We encourage all systems, during revision periods, to focus specifically on incorporating water stewardship requirements to: assess catchment dependencies, ensure future climate resilience, take action beyond the farm (collective action & water governance engagement), set absolute limits (on water balance & quality), and address aquatic invasive species. To this extent we have compiled some of the stronger practices from across the assessed standards in this report to help identify best practices in each of these areas (Annex A). We encourage all systems to engage peer standard systems to build on this and learn from experience.
- (B) Strengthening wording to create more robust requirements:** This report has explored the degree of water stewardship and the extent to which updated systems have strengthened their wording. The exercise of undertaking the assessment also allowed for best practices to be identified across the 25 assessed systems. Looking forward, we believe that seeing how other standards address requirements (from wording to coverage) could be very useful for standard holders to tighten wording and make stewardship requirements stronger. Accordingly, we have developed a summary of some of the strongest language and framing for each of the water stewardship framework elements in this report (Annex B).
- (C) Exploring new and progressive concepts:** Finally, there are areas of water stewardship that are still new, which need greater attention by virtually all systems. Progressive concepts such as how to embed collective action, governance engagement, and context-based water targets (Box C) still need greater attention. While we recognize that these concepts likely need to mature before they are assimilated into standards, we call upon standards systems to consider contributing to their development and driving adoption through voluntary criteria.
- (D) Complementing efficiency measures with cumulative basin impact approaches:** Water efficiency and effluent management remain the most well covered issues of the 25 issues explored in the water stewardship assessment framework. However, as noted (Box B), water use/quality efficiency, if not well considered through a cumulative basin impact approach, can in fact result in further challenges (as noted earlier in Box B). Efficiency measures can be a huge benefit – indeed, they are a necessary part of what is required – it is just that they need to be supplemented with a “basin lens”. In other words, we need to think about efficiency as part of a system of cumulative impacts. New approaches, that combine agricultural

We encourage all standards to incorporate water stewardship requirements

best management practices with cumulative basin modelling (as well as explore context-based water targets as they emerge), can be a powerful way to ensure that savings are optimized across the basin (see Boxes C and D for more details).

**BOX C: Context-based water targets**

In April 2017, CDP, the Nature Conservancy, Pacific Institute, the United Nations CEO Water Mandate, World Resources Institute and WWF published a document entitled „Exploring the case for corporate context-based water targets“. At the heart of this paper was the notion of re-defining how water use is measured, reported, and targeted to ensure that water use is sustainable in a basin context both environmentally and that allocation was socially equitable. Such a metric sets the stage to break free from the water efficiency challenges noted earlier (Box B), by enabling a metric that accounts for both farm-level water use and a portion of basin-level water availability. Using a context-based water metric would help standards account for both efficiency gains and cumulative impacts and offer a more contextually-relevant target that accounted for whether water is scarce, abundant, polluted or clean. While there is still some way to go before they're well established and proven, the concept offers an exciting possibility to link stronger water stewardship performance into standard system criteria.



**RECOMMENDATION 3**  
**Enhance standard systems collaboration**

Certification fatigue is well recognized by promoters of standard systems, as well as implementers in the field. Direct, bilateral or multilateral system collaboration offers significant efficiencies for farmers and the supply chain. In an effort to minimize the burden of overlapping, standard system collaboration represents one elegant approach. The alignment of requirements, wording, business models, auditing processes and training have been gaining traction increasingly over the past years (see Box E). Forms of collaboration worth highlighting are:

- (A) Mutual recognition**  
 Mutual recognition remains the exception rather than the rule. Nevertheless, we are seeing more of this approach. RSB merits particular attention in this regard as it has established recognition in various systems including SAI Platform, Fairtrade, and Forest Stewardship Council.

To counter „certification fatigue“ standards need to collaborate - and water is a perfect topic for that.

Standards are exploring inter-system „add-ons“.

#### (B) Add-Ons

Inter-system “add-ons” is another form of collaboration that is increasingly being explored. The notion of an “Intel Inside” approach in which a standard gets embedded into another standard as an add-on is a very interesting approach that some standards are exploring (e.g. AWS & GlobalG.A.P. – see Box E). Such an approach is particularly well suited to the combination of commodity-based standards and standards that are issue-based (e.g. AWS & water stewardship, RSB & biomaterials). We expect in the coming years to see more of this as a form of collaboration.

#### (C) Service provision

Another interesting development, is the notion of collaborating for training and service provision. This concept builds on each other’s strengths and offers another pathway for collaboration, which can help to ensure efficiencies in training, as well as potentially deeper coverage. Over the past two years, AWS and BCI have explored this concept by cross-training staff on BCI and AWS training programs to support joint service delivery.

#### BOX D: Ensuring good intentions result in greater impacts

The Cedar River basin, located in the United States’ Midwest, is the source of drinking water for this second largest city in Iowa. It is also a basin that has a heavy agricultural presence and faces challenges around nitrate contamination of drinking water. Through the “Middle Cedar Partnership Project” (MCP), WWF, TNC and 14 other public and private partners have come together to focus on ensuring agricultural best-management practices (BMPs) reduce erosion, keep nutrients in farm fields and improve water quality for downstream users. Using a model, the MCP enables the group to explore cost-effective solutions that optimize ‘nutrient efficiency’ solutions to deliver basin scale impacts. The combination of agricultural BMPs that tie individual gains to basin-wide cumulative impacts, lies at the heart of ensuring water efficiency (be it quality or quantity) = basin level impacts.

For more information, see: <https://www.worldwildlife.org/blogs/on-balance/posts/designing-agricultural-watersheds-with-science-and-community-engagement>

Although we have seen some trends towards proprietary agricultural sustainability standards (as noted back in Box A), we continue to see the role for standard systems to also act as convenor. Standard systems can encourage companies to not only collaborate with one another, but also with public sector agencies (to align with SDGs), and to involve civil society organizations. By establishing common core requirements, guidance, etc. and maintaining third party oversight, there is the potential for continuing to not only grow use of sustainability standards from the early adopters/mainstream, to the late mainstream, but also to enable collaboration and alignment towards common aims through dialogue.

The apparel sector, for example, has seen strong alignment through the Sustainable Apparel Coalition’s HIGG index and supplier engagement aligned to BCI and Organic. In an industry with only minimal supply chain influence, this alignment has created not only influence, but also helped to minimize competing reporting asks of suppliers.

In short, continue efforts to integrate – from mutual recognition and cross training (e.g. RSB) to sharing best practices and joint platforms (e.g. ISEAL IPM Coalition).

For GlobalGAP, a water stewardship add-on could widen the focus from farm to river basin

#### BOX E: Potential collaboration between GLOBALG.A.P. and AWS – Integrating water stewardship into Good Agricultural Practices worldwide

Enrique Uribe (GLOBALG.A.P.) and Johannes Schmiester (WWF-Germany)

All agricultural standards face increasing shared water challenges, yet also face the ongoing challenge of ensuring that their systems are viable for farmers and companies. GLOBALG.A.P. acknowledged that their Integrated Farm Assurance (IFA) standard’s focus lies within producers’ fence-lines and that the standard could potentially be improved in regard to catchment-based water stewardship by drawing from AWS’ expertise. On the other hand, AWS identified the great potential to broaden the uptake of its standard with agricultural producers by cooperating with GLOBALG.A.P. Furthermore, both organizations share members who increasingly require water stewardship standards for agricultural producers in locations with high water risks. In the light of these considerations, the two organizations recently entered into a discussion on potential pathways for a mutually beneficial cooperation.

GLOBALG.A.P.’s members have requested options of how such cooperation could manifest. One possible pathway for such cooperation is the creation of a Water Stewardship “add-on” to the GLOBALG.A.P. IFA standard. Such an add-on would require the following general steps:

- 1. Cross-reference standard requirements:** Identify unique and overlapping requirements between GLOBALG.A.P. IFA standard and the AWS Standard to fill gaps and avoid redundancy.
- 2. Test the draft add-on:** To ensure it is fit for purpose, the preliminary draft will need to be tested in different production systems at the field level, resulting in a more robust version that can be approved by the different technical committees among GLOBALG.A.P. and AWS.
- 3. Joint communication of the new offering:** The final version of the AWS-aligned water stewardship add-on to GLOBALG.A.P.’s IFA standard will then be disseminated among GLOBALG.A.P.’s and AWS’ members as well as other relevant stakeholders, highlighting both its existence and benefits.

Complementary to such an add-on, collaboration between the two organizations’ stakeholder networks would increase efficiency in the sector. For example, by using the ‘one auditor through the farm gate’ principle it is possible to reduce resources, with producers, communities, suppliers and retailers all profiting from the benefits. Furthermore, both GLOBALG.A.P.’s and AWS’s capacity building infrastructure could potentially be used to raise awareness and create know-how regarding water stewardship.

In the near future, GLOBALG.A.P. and AWS will further engage in the dialog with their joint members to explore possible pathways of further integrating water stewardship into good agricultural practices worldwide.

#### 4.2 Part B – Companies with Significant Agricultural Supply Chains

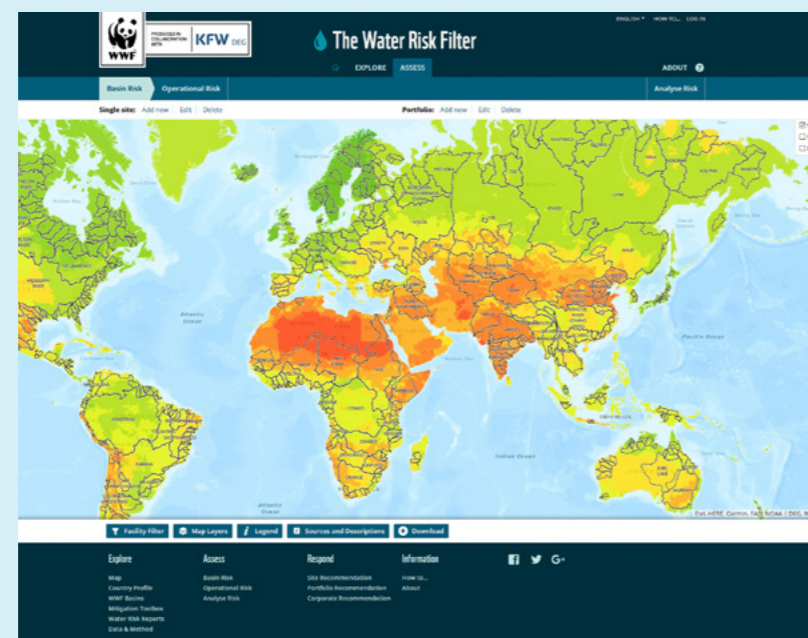
Over the past decade, WWF has helped to popularize the concept of water stewardship within the hallways of Global 500 companies and helped to drive improved commitments and actions. Indeed, since 2007, the conceptual foundation of water stewardship has grown considerably globally. The realization that mitigating water risks invariably requires collective action and water governance engagement, has arguably been the fundamental concept in water stewardship that distinguishes it from more traditional water management.

As we look to the future and the evolution of water stewardship, we suggest that the next “big ideas” in water stewardship are likely to be around the nexus of context, especially how water use/quality efficiency must consider cumulative impacts, and revisiting the role of companies in various forms of water governance. In short, we are going to need to make a conceptual shift away from less bad agriculture and into contextual, systemic, basin-oriented form of agriculture that supports sustainable use of water as a common pool resource. Individual actions will need to be complemented by collective actions to ensure that our food-water-energy-eco-systems can thrive.

The assessment outlined in this report stemmed, in part, from our experiences working with many of the leading food, beverage, apparel and retail companies who have significant water risk exposure primarily through their agricultural supply chains. Many of these companies also rely heavily upon credible agricultural sustainability standard and certification schemes (such as those that follow the ISEAL codes of conduct) to ensure responsible sourcing and risk mitigation. We continue to believe that such credible standards represent a worthwhile approach and do indeed deliver value to various parties and positive impacts for people, planet and profit.

### BOX F: Harnessing tools to explore water risk in agricultural supply chains - Water Risk Filter

The starting point for any company with a significant agricultural commodity supply chain is to engage in a water risk assessment. In 2011, WWF launched the Water Risk Filter – a free, online tool that enables users to input, assess and respond to water risks. The tool is unique in that it is the only water risk tool to explore both basin and operational water risk. Furthermore, as of January 2018, the tool will also offer customized recommendations to mitigate risk based upon risk exposure, as well as a valuation module that will translate water risk into financial statement impacts. To manage water risks, one must first measure water risks and the Water Risk Filter is a helpful resource to get started.



However, having run water risk assessments, often the water stewardship issues covered by select agricultural sustainability standards do not match the water risk exposure. In other words, the use of a certain standard may not address a given water risk (e.g. organic standards generally do not address water scarcity).

### Summary of recommendations to companies with significant agricultural supply chains

For those corporate audiences with significant agricultural supply chains, we offer the following recommendations:

#### RECOMMENDATION 1

##### Know your water risk and use credible standards, but make sure the standards you employ are fit for purpose as you seek to mitigate your water risks

- » Credible agricultural sustainability standards remain an important tool to ensure responsible and reliable agricultural supply chains. While codes of conduct can also be useful, we continue to advocate for multi-stakeholder approaches that employ third party certification.
- » Your greatest water risk exposure is likely to be through your agricultural supply chain. Accordingly, undertake a water risk assessment (for example via the Water Risk Filter: <http://waterriskfilter.panda.org/>) of your operations and agricultural supply chains
- » Be aware of agricultural standard system coverage of water stewardship. We continue to see situations in which companies are under the impression that a given standard (e.g. organic) is covering water issues (e.g. water balance/scarcity) when in fact it does not.
- » With a risk assessment and a sense of a standard’s water stewardship coverage, ensure that the water issue addressed by your code of conduct/standards matches your water risk exposure. Ensure such an assessment covers not only basin risks, but also operational risks and mitigation responses to understand if the responses are fit for purpose.
- » Check which minor/voluntary/non-required criteria were met by growers as many standards potentially cover issues, but not always (or not right away).

#### RECOMMENDATION 2

##### Accelerate sector collaboration to advance water stewardship in standards

- » Continue sectoral efforts to align requirements, guidance and terminology (e.g. SAC & HIGG)
- » Ensure proprietary codes of conduct (if necessary) are well aligned with existing efforts to minimize confusion and burdens on growers and maintain third party oversight.

- » Act together to strengthen water stewardship in standards requirements and throughout the sector.
- » Consider alignment using frameworks that extend beyond the sector to help drive inter-sectoral collaboration (e.g. AWS, SDG6)

**RECOMMENDATION 3**  
**Engage and disclose on water stewardship in agriculture**

- » There continue to be numerous initiatives to enhance transparency and review progress of mitigating agricultural supply chain risk (e.g. Ceres Feeding Ourselves Thirsty, Ceres & WWF’s AgWater Challenge, CDP Water, work from UNPRI, etc.). These are typically driven by investors who are increasingly stating their concerns over value at risk from water events.
- » Learning comes from engagement. We encourage all companies to learn from each other and from other organizations (e.g. NGOs). In addition to partnerships with leading NGOs, membership to the Alliance for Water Stewardship or becoming a signatory to the CEO Water Mandate offer two other strong options for companies seeking to learn how to become a leader on water stewardship.

Water stewardship remains a material concern to companies and investors that largely manifests in agricultural supply chains. Without a strong response, communities, nature and business interests all suffer in the long term. The use of agricultural sustainability standards, when accompanied by robust water stewardship requirements, offers a pathway to address this concern. Adopting the recommendations above, we believe that standards can be a powerful mechanism to achieve stronger farming systems for the planet and people alike.



**5**

**Conclusion**

Water continues to be a challenge facing retailers, food & beverage companies, processors and farmers alike. Water is also a material issue for agricultural sustainability standards. Water risks continue to affect not only human livelihoods, but also freshwater ecosystems and pressures continue to mount. Indeed, the shared challenges facing our food-water systems has never been greater and only shows signs of growing in the years to come.

As the 2015 report noted, all of the standards assessed in this report are playing a role in helping to address the shared water challenges facing our planet’s water resources. The 2017 report highlights that progress has been made in general on various fronts with most updated standards showing progress. In particular, improvements in understanding context, developing adaptive water stewardship plans, and thinking around the need to work beyond the farm fencelines are promising. Furthermore, there are emerging signs of collaboration, unified approaches and overall, actions that suggest water stewardship thinking is penetrating thinking in agricultural sustainability standards. There are emerging concepts (e.g. Context-Based Water Targets, Box C), and collaborative approaches (e.g. joint standards training, embedding standards into one another through add-on approaches) that indicate that water stewardship integration into agricultural sustainability standards continues to progress.

Nevertheless, challenges remain. Notably, the ongoing focus of attention on efficiency and pollution reduction without a linked basin perspective to consider cumulative impacts is a concern, as is the general lack of recognizing absolute limits (& basin thresholds). Declines in some standards in select areas (e.g. WASH provision, water-related land conversion) and in select standards (e.g. Sustainable Rice Platform) are disconcerting. The trend of proprietary supplier codes of conduct remains something to track, as does general certification fatigue.

This report offers not only an assessment of water stewardship issues across agricultural sustainability standards for both standard systems and companies alike. It also offers several key takeaways: you’re your context and water risks, be sure you’re considering collaboration and water governance, ensure efficiency efforts are supplemented with cumulative impacts, and collaborate. Indeed, only through working together can we hope to address the shared water challenges that we all face.

**Water stewardship integration into agricultural sustainability standards continues to progress.**



ANNEX A: Best Practice Examples

For brevity only the criteria/requirements numbers are shown below. For a full table, including the text from noted criteria/requirements, please contact the author: Alexis Morgan (amorgan@wwfint.org).

Assessment Framework	Reference To Standard's Requirements	Standard
<b>1</b>	<b>Water Governance and Management</b>	
<b>1.1</b>	<b>Legal Compliance</b>	ISCC+202(Susty Req): P1-5, 2.5.2 F34; F40b; 12.1; F111, F170; F205; F206; F207 FSA2, FSA56, FSA58, FSA68
		ISCC Unilever SAC SAI (FSA)
<b>1.2</b>	<b>Land and Water Rights (Indigenous Peoples' Rights, Traditional Use Rights, including free, prior and informed consent where applicable)</b>	4.2.4, 4.2.5 2b, 4g, 9a 2.1, 2.2, 2.3, 5.2, 6.4, 7.1, 7.5, 7.6
		BCI RSB RSPO
<b>1.3</b>	<b>Water risk &amp; context I: Consideration of catchment dependencies</b>	2.1, 2.3 2a, 9d B(I)6; B(I)7.2; B(I)7.2.3
		AWS RSB Naturland
<b>1.4</b>	<b>Water risk &amp; context II: Consideration of catchment impacts (Environmental and Social Impact Assessment)</b>	2a, 5a, 9b 1.1, 1.2, 2.3, 4.4, 5.1, 5.2, 6.1, 7.1, 7.4 1.4, 3.21
		RSB RSPO SAN
<b>1.5</b>	<b>Adaptive water management plan or policy ideally backed by leadership commitment</b>	1.2, 3.1, 3.2, 3.3 2.1, 2.1.2 1.6, 1.7, 1.8, 1.9, 1.10, 1.12, 7.1, 7.2,
		AWS LEAF BCI
<b>1.6</b>	<b>Transparency, Disclosure and Stakeholder Consultation</b>	2.2, 5.3, 6.1, 6.2, 6.3 1.1, 1.2, 2.3, 5.1, 6.1, 6.2, 6.3, 6.4, 7.1, 7.3, 7.5, 7.6 9b3, 9c4
		AWS RSPO RSB
<b>1.7</b>	<b>Dispute Resolution</b>	4h, 9a3 1.2.1, 5.8 4.12, 4.21
		RSB Bonsucro ISCC Plus
<b>1.8</b>	<b>Catchment-level collaboration / Collective Action</b>	3.4, 4.5, 4.8 9d6 2.1, 2.1.9, 2.1.16
		AWS RSB BCI
<b>1.9</b>	<b>Consideration of Indirect Water Use and supply chain engagement</b>	2.5, 4.6 1.1.6, 9.5.1 F139
		AWS ProTerra Unilever (SAC)
<b>1.10</b>	<b>Future Scenario &amp; Resilience Planning</b>	2.3, 2.6 1, 2, 2.1 2.2 (WEC2), 2.5 (WEC5)
		AWS BCI SAI (SWM)
<b>1.11</b>	<b>Water, Sanitation and Hygiene for staff</b>	I.C.103, I.C.104, I.C.105, I.C.107, 4.12, 4.43 4,7
		Unilever SAC SAN AWS
<b>1.12</b>	<b>Catchment governance and policy engagement</b>	3.4, 4.5, 4.8 HL 4.3.11 2.1 (especially 2.1.9 and 2.1.16)
		AWS FT-HL BCI

Assessment Framework	Reference To Standard's Requirements	Standard
<b>2</b>	<b>Water Balance</b>	
<b>2.1</b>	<b>Quantitative water use information (environmental flow, water use, net withdrawal, monitoring)</b>	1.1 (WSF1), 2.3 (WEC3), 2.4 (WEC4), 4.1 (WENV5), 4.6 (WENV14) 2a, Principle 9, 9a, 9b and see Assessment Guidelines pp8, 9-13, 23, 24. 2.3, 2.4
		SAI (SWM) RSB AWS
<b>2.2</b>	<b>Water use efficiency</b>	9b, 9b2, and see ESMP p22. 1.4, 4.1, 4.2 I.B.60, I.B.61, I.B.64, I.B.65, I.D.111
		RSB SAI (V&C) Utz
<b>2.3</b>	<b>Absolute or contextual water quantity limitations (surface and groundwater)</b>	9b, 9b1, 9c (especially 9c3 and 9c4) Ex2
		RSB CMiA
<b>3</b>	<b>Water Quality Status</b>	
<b>3.1</b>	<b>Qualitative water use information (indicators, monitoring)</b>	AF 1.2.1, Annex AF2; CB 5.3.2, 5.3.3, Annex CB 1; FV 4.1.2a, 4.1.2b, 4.1.3, 4.1.4 2.3, 2.4, 2.5, 3.2, Appendix II 2.3, 2.4
		GlobalG.A.P. ASC AWS
<b>3.2</b>	<b>Effluent management: fertilizer, pesticides, soil management/ erosion, waste management</b>	AF 1.2.2, 6.1.1, 6.2.1, 6.2.3, 6.2.5, CB 3.5, 3.6, 4.2, 4.3, 4.4, 4.5, 5.3, 1.1.1, 1.1.3, 1.2, 1.2.1, 1.2.2, 1.2.3, 1.3, 1.3.1, 1.4, 1.4.1, 1.4.2, 1.4.3, 1.4.4, 1.5, 1.5.1, 1.5.2, 1.8, 1.8.1, 1.9, 1.9.1, 1.9.2, 1.9.3, 2.1, 3.1, 3.1.1, 3.1.4, 3.1.5, 3.1.6, 3.1.7, 3.1.11, 3.1.12, 3.1.13, 3.1.15, 3.1.16, 3.1.17, 3.1.21, 3.1.24, 3.1.25 2.3.1, 2.3.2, 2.4.1, 2.4.4, 2.5.3, 2.6.1, 2.6.2, 2.6.4, 2.6.5, 2.6.6, 2.6.7, 2.6.8, 2.8, 2.8.1, 2.8.2, 2.8.3, 2.8.4, 2.8.5, 2.8.6, 2.8.9, 2.8.10, 2.9.1, 2.9.2, 2.9.3, 2.10.1, 2.10.2, 2.10.3, 2.10.5
		GlobalG.A.P. BCI ISCC
<b>3.3</b>	<b>Absolute or contextual water quality limitations</b>	2.3.1, 2.4.1, 2.4.2, 2.4.3, 2.4.4, 2.5.1, 3.2, 6.2 Appendix II 9c3, 9d, especially 9d5, and see Water Assessment Guidelines p.22
		ASC RSB
<b>4</b>	<b>Important Water Related Areas</b>	
<b>4.1</b>	<b>Management of Riparian, Wetland and other Water-related Habitat Areas</b>	F42, F43, F444, F45, F49, F55, F58, F138 2.1, 4.1, 4.1.6, 4.1.12, 4.2 3.7, 5.2, 5.6, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.9, 8.19
		Unilever SAC BCI LEAF
<b>4.2</b>	<b>Management of Water-related Areas of Religious, Cultural or other Social Importance</b>	2.3, 2.4, 4.4 1.3.1, 1.3.2, 3.2.4, 4.1, 4.1.1, 4.4
		AWS RTRS
<b>4.3</b>	<b>Water-related Land Use Conversion (past and future) and Restoration</b>	4.1.1 4.1, 5.7, 6.1 7a, 7d
		ProTerra Bonsucro RSB
<b>4.4</b>	<b>Rare, Threatened and Endangered Freshwater Species</b>	F57, F58 4.1, 6.1.2 4.1, 4.1.11
		Unilever SAC Bonsucro BCI
<b>4.5</b>	<b>Aquatic Invasive Species</b>	2.12, 5.19 F58 7e
		SAN Unilever SAC RSB

Assessment Framework		Explanation of assessment
<b>1</b>	<b>1. Water Governance and Management</b>	
<b>1.1</b>	<b>Legal Compliance</b>	There is a generic reference to legal compliance that would cover compliance with legal requirements related to water (e.g. abstraction, effluent) and/or specific reference to legal compliance in relation to water and implies some form of verification of compliance.
<b>1.2</b>	<b>Land and Water Rights (Indigenous Peoples' Rights, Traditional Use Rights, including free, prior and informed consent, where applicable)</b>	There is explicit reference to compliance with indigenous, and/or local communities, water rights, either referred to directly or else referred to by reference to ILO69, UN Declaration of Rights of Indigenous Peoples, or to national legislation which acknowledges such rights. Or: there is reference to the principle of FPIC which would be expected to result in rights being recognised and respected in practice. NOTE: FPIC issues are restricted to this evaluation aspect.
<b>1.3</b>	<b>Water risk &amp; context I: Consideration of catchment dependencies</b>	There is explicit reference to the need for water users to be aware of the overall situation (context) of water use, availability/status and risks at the catchment level, including identifying and understanding shared water infrastructure, water balance, water quality and water governance/policy.
<b>1.4</b>	<b>Water risk &amp; context II: Consideration of catchment impacts (Environmental and Social Impact Assessment)</b>	There is an explicit requirement to consider impacts of water use in the catchment (including cumulative impacts), and for siting or expansion, carry out an environmental and social impact assessment (ESIA) or Strategic Environmental Assessment (SEA) covering the organisation's water use.
<b>1.5</b>	<b>Adaptive water management plan or policy ideally backed by leadership commitment</b>	There is an explicit requirement for users to develop a 'water management plan or policy' bringing together the main elements of water management within an integrated framework that ensures legal and rights compliance and resilience to water-related risks.

SCORE 0 No significant fulfillment of criterion	SCORE 1 Limited fulfillment of criterion/ indirectly referenced (significant gaps)	SCORE 2 Fulfillment of criterion (limited gaps)	SCORE 3 Substantive fulfillment of criterion (very limited/no gaps)
The standard has no explicit elements that would be expected to make a significant contribution to the framework criterion, or elements may be mentioned in an extremely vague way, with no indication that applicants would be expected to take action to address the issue.	The standard addresses limited elements of the framework criterion, but also misses out some significant elements; indirectly references or addresses the criterion but without giving enough detail to give confidence of consistent implementation; or, addresses the main elements of the framework but in way that even in the long term compliance is voluntary.	The standard explicitly addresses the framework criterion, and includes sufficient detail to give confidence in effective and consistent implementation, but it is still limited in some manner (often not providing water-specific elements).	The standard substantively and comprehensively addresses the framework criterion, often with water-specific references, and includes sufficient detail to give confidence in effective and consistent implementation.
Legal compliance is not noted within the standard.	Legal compliance is broadly stated as an "underlying premise" but not explicitly required within the PCI or is explicitly required, but is highly restricted to a specific area (e.g. labor, certain geography, etc.)	Legal compliance is a required element of the standard's PCI in a manner that would cover water-related issues OR explicitly covers a limited number of water issues (e.g. quality only).	Legal compliance is a required element of the standard's PCI and calls out water-specific requirements (including at a minimum, both water quality and quantity requirements).
Land/water rights and IP rights are not explicitly referenced or required within the standard.	There are references to land/water rights or to IP rights (or FPIC), but mandatory land/water requirements are lacking.	There are explicit references and requirements related to land/water rights or IP rights or FPIC, but not all together.	There are explicit references and requirements related to land/water rights and IP rights and FPIC. Water must be explicitly noted.
No references within the standard to catchment context nor a water risk assessment.	The standard encourages or suggests consideration of the water context or a risk assessment, but lacks explicit water requirements or is highly restricted in its scope.	The standard explicitly requires consideration of the water context or a water risk assessment, but does not take into account all aspects (e.g. shared water infrastructure, or how this must be considered in planning).	The standard requires comprehensive consideration (gathering information and informing actions) based on the catchment context/water risk assessment; and/or has a dedicated criterion related to this issue that considers upstream and downstream aspects, and requires that this information be incorporated into planning/decision making.
There is no requirement to explore water impacts nor carry out an ESIA during siting/expansion and impacts are not tracked on an ongoing basis.	Water impact tracking and/or an ESIA/SEA is referenced, but is an optional element, encouraged, or not required, or is highly restricted to a limited dimension.	Water impact tracking and/or an ESIA/SEA is required with no specific water references or is limited in some respect (e.g. missing social aspects).	Water impact tracking and/or an ESIA/SEA is required and the standard explicitly references water-related aspects of such an assessment, ideally noting cumulative impacts.
No environmental or water management plans are required.	Management plans are encouraged that broadly cover environmental issues, but water is not explicitly mentioned OR are highly restricted to very specific issues.	Management plans are required that broadly cover environmental issues, but water is not explicitly mentioned OR water management is mentioned but is very limited in its scope OR lacks leadership backing.	An explicit water management plan or policy is required (or an environmental management plan in which water is explicitly noted) that must either be updated/adapted regulatory OR have leadership support.

Assessment Framework		Explanation of assessment
1.6	<b>Transparency, Disclosure and Stakeholder Consultation</b>	There are explicit requirements for the organization to make information about its planned and actual water use publicly available, and to consult with affected stakeholders in relation to its plans.
1.7	<b>Dispute Resolution</b>	There are explicit requirements for processes to be in place that would allow stakeholders to bring concerns related to the organization's water use to the organization's attention, and that would oblige the organization to make a serious effort to resolve any such issues to the satisfaction of the complainant, including through the possibility of compensation. NOTE: General stakeholder feedback mechanisms are covered above; it must involve a requirement related to dispute resolution.
1.8	<b>Catchment-level collaboration / Collective Action</b>	There are explicit requirements in place for the organization to identify and collaborate with other water users in the catchment, either directly or else through participation in existing catchment level associations or plans, to address catchment level issues. NOTE: While supply chain actions may fall into this category, the emphasis in this element is around explicit spatial proximity within the affected catchment(s).
1.9	<b>Consideration of Indirect Water Use and supply chain engagement</b>	The organization is required to identify its indirect water use and, if this is significant, to implement actions to reduce the impact of such indirect use, most notably in the supply chain.
1.10	<b>Future Scenario &amp; Resilience Planning</b>	The organization is required to identify projections for water use in its catchment in the long term (e.g. to consider the implications of climate change projections and population growth) and to consider the implications (i.e. resilience requirements) for the sustainability of its own water needs.
1.11	<b>Water, Sanitation and Hygiene for staff</b>	The standard has explicit provisions that require the site to take actions to provide water, sanitation and hygiene awareness to staff.
1.12	<b>Catchment governance and policy engagement</b>	There is an explicit requirement to engage catchment-level governance mechanisms (e.g. coordinating efforts) or on water policy issues.
<b>2</b>	<b>Water Balance</b>	
2.1	<b>Quantitative water use information (environmental flow, water use, net withdrawal, monitoring)</b>	The organization is required to collect or at least have access to information about its own planned and actual water use on a monthly basis over the year, and has information about the availability of any 'blue water' it would need to use to meet its needs. The organization has information about the efficiency of its water use (e.g. use per unit of production). There is evidence that its water needs can be met without compromising the 'environmental flow' requirements of any affected water courses.
2.2	<b>Water use efficiency</b>	The organization is required to implement all applicable and effective actions to ensure that its own water use is minimised. Measures may include: prohibition of irrigation; efficient irrigation; soil management; proactive support for water reuse or recycling
2.3	<b>Absolute or contextual water quantity limitations (surface and groundwater)</b>	There are clear, explicit limitations that would prevent the organization withdrawing water if this would compromise the 'environmental flow' requirements of any affected water courses.

SCORE 0	SCORE 1	SCORE 2	SCORE 3
No explicit requirements are present in the standard to engage stakeholders or provide elements of transparency.	Concepts such as transparency and stakeholder engagement are encouraged, or present in a very limited/restricted manner (e.g not in standard, but accounted for via certification exercise).	Requirements on either transparency or stakeholder engagement are explicitly included in the standard, or both, but no water elements are flagged (or water elements flagged, but stakeholder engagement is limited).	Requirements on transparency and stakeholder engagement are present with water-issues being explicitly flagged for consideration.
No explicit requirements are present in the standard to resolve disputes.	No explicit requirements but the concept of dispute resolution is suggested via guidance or optional use or indirectly included via certification exercise.	Requirements on dispute resolution are explicitly included in the standard, but water issues are not referenced.	Requirements on dispute resolution are explicitly included in the standard, and water issues are referenced.
No explicit requirements are present in the standard to engage in collective action/ collaboration.	No explicit requirements but the concept of collaboration is referenced and encouraged via guidance (or is highly restricted in its nature).	Collaboration with other groups is a required aspect of the standard, but such collaboration is broadly applied to environmental concerns (not water specific) OR is water-specific but only involves very limited collaboration (collaborative solution/actions not required).	Collaboration (to jointly take action on shared challenges) with other groups is a required aspect of the standard, and is water-specific.
No requirements are present in the standard to consider indirect water use.	No explicit indirect water use requirements, but the concept is directly or indirectly referenced and encouraged via guidance, etc.	Indirect water use measurement is explicitly referenced and required in the standard (but not action to address such use) OR action, but not measurement.	Indirect water use measurement and action is explicitly referenced and required in the standard.
No requirements are present in the standard to consider long term water scenarios in the organization's catchment(s).	No explicit requirements but the concept of considering future environmental conditions is suggested via guidance or optional use.	Future considerations or scenarios (broadly related to environmental change) are required, but water is not explicitly referenced OR water is referenced (but in a limited fashion).	Future water considerations or climate change scenarios are explicitly required. Water must be explicitly referenced.
No reference to WASH related issues throughout the standard.	WASH issues (or WASH-like concepts) are referenced in the standard, but not required with concepts of WASH encouraged via guidance.	One or more (but not all three) elements of WASH are explicitly referenced and required by the standard.	Access to water, sanitation and hygiene awareness are all explicitly included in the standard.
No reference to catchment governance or water policy engagement.	Catchment governance and water policy engagement (or linked concepts) are referenced in the standard, but not required or are very highly restricted.	Aspects of catchment governance or water policy engagement are explicitly referenced and there are limited requirements for action in this regard.	Aspects of catchment governance or water policy engagement are explicitly referenced and actions are specifically required.
No water withdrawal/ consumption measurements are referenced or required in the standard.	Water withdrawal or consumption information is referenced within the standard, but not required to be gathered OR information requirements are highly restricted in their applicability.	Some form of either water withdrawal or consumption information is explicitly required in the standard, but is not comprehensive (i.e. does not cover withdrawals, consumption, relative source availability, etc.).	Both water withdrawal and consumption (and catchment availability) are explicitly required in the standard in addition to other details on water use (e.g. e-flows, blue/green water use, etc.).
No reference to water use efficiency (or minimizing water use).	Efficient use of water (or minimizing water use) is referenced and encouraged, but not explicitly required in the standard OR is highly restricted.	Implementing water use efficiency practices is explicitly referenced and required, but improvements towards best practice are not explicitly required.	Implementing water use efficiency is both referenced and explicitly required in the standard and the standard includes a reference to moving towards best practice.
No absolute quantitative water use limitations are referenced in the standard.	The concept of not exceeding "sustainable water use levels" or "avoiding impacts" is referenced, but not explicitly required.	A form of absolute withdrawal or consumption limitation is explicitly referenced and required, but it is not comprehensive or specific.	A specific and comprehensive approach to limit absolute water withdrawals and/or consumption is explicitly referenced and required.

Assessment Framework	Explanation of assessment
<b>3</b>	<b>Water Quality Status</b>
<b>3.1</b>	<p><b>Qualitative water use information (indicators, monitoring)</b></p> <p>The organization is required to collect or at least have access to appropriate information about any impacts it may have on water quality. Information may include measurement of water quality of any waste water, measurement of water quality of water sources at the point of use and at the point that water leaves the organization's sphere of influence. Measurements include key aspects of water quality that might be affected by the organization's activities, such as pH, temperature, COD, sediment load, pesticide pollution, nitrate level, etc.</p>
<b>3.2</b>	<p><b>Effluent management: fertilizer, pesticides, soil management/ erosion, waste management</b></p> <p>The organization is required to implement all applicable and effective actions to ensure that its own negative impacts on water quality are minimised. Measures may include: prohibitions on pesticide use; effective limitations on pesticide use; effective limitations on fertiliser use to ensure there are no excess nutrients entering water courses; measures to prevent soil erosion; measures to clean waste water, etc.</p>
<b>3.3</b>	<p><b>Absolute or contextual water quality limitations</b></p> <p>There are clear, explicit thresholds defining impacts on water quality, such that if the organization causes any significant negative impact on water quality it could not be certified.</p>
<b>4</b>	<b>Important Water Related Areas</b>
<b>4.1</b>	<p><b>Management of Riparian, Wetland and other Water-related Habitat Areas</b></p> <p>The organization is required to identify, map, protect, and manage or restore riparian, wetland and other significant water-related habitats on its property in ways that protect water-related biodiversity, preferably based on an integrated biodiversity management plan with a clear indication that it would include consideration of water-related habitats.</p>
<b>4.2</b>	<p><b>Management of Water-related Areas of Religious, Cultural or other Social Importance</b></p> <p>The organization is required to identify, map, protect, and manage or restore Water-related Areas of Religious, Cultural or other Social Importance on its property.</p>
<b>4.3</b>	<p><b>Water-related Land Use Conversion (past and future) and restoration</b></p> <p>The standard has explicit provisions to prevent the conversion of water-related areas that are likely to have high conservation value, either before or during the period during which the property is certified.</p>
<b>4.4</b>	<p><b>Rare, Threatened and Endangered Freshwater Species</b></p> <p>The standard has explicit provisions, in addition to any general requirements to protect riparian or wetland habitats on its property, designed to ensure the protection of any rare, threatened or endangered species that may be affected by the organization's activities in relation to water or water-related habitats, e.g. through special programs to identify and protect such species, through the identification and protection of nest sites, feeding areas, etc. through measures to prevent hunting or fishing. A generic reference to the HCV concept should be supported by explicit reference to need to protect RTE species.</p>
<b>4.5</b>	<p><b>Aquatic invasive species</b></p> <p>The standard has explicit provisions that effectively prevent any accidental release or introduction by the organization of invasive species (animal or plant) that would have any deleterious effect on riparian ecology, including e.g. fish escapes, escapes of animals that prey on water-related species, species that have a negative impact on water-related habitats, etc. Where invasive species are already present, there is a requirement to take effective action to limit any damage caused by the invasive species.</p>

SCORE 0	SCORE 1	SCORE 2	SCORE 3
No water quality measurements are referenced or required in the standard.	Water quality information is referenced within the standard, but not required to be gathered OR is highly restricted.	Some form of water quality information is explicitly required in the standard, but is not comprehensive (i.e. does not cover all water quality impacts).	Comprehensive water quality information (covering both site and environment) is explicitly required in the standard with information on how such information is to be used.
No reference to water effluent (or minimizing water-based pollution).	Effluent management (or minimizing water pollution) is referenced and encouraged, but not explicitly required in the standard.	Effluent management is explicitly referenced and required, but improvements towards best practice are not explicitly required.	Measuring and implementing best practices with respect to effluent management are both referenced and explicitly required in the standard OR the standard contains extensive water-specific effluent/pollution requirements.
No absolute water quality limitations are referenced in the standard.	The concept of not exceeding "sustainable water use levels" or "avoiding impacts" is referenced, but not explicitly required.	A form of absolute water quality limitations is explicitly referenced (e.g. WHO) and required, but it is not comprehensive (e.g. only covers drinking water and not ambient water body) or specific enough or does not account for context.	A specific and comprehensive approach to limit absolute water quality is explicitly referenced and required that also accounts for context.
Nothing related to management of ecologically important water areas are referenced in the standard.	The standard references the concept of identifying or taking action on ecologically important water areas, but actions are not required OR there are broad biodiversity requirements but nothing explicitly water-related.	The standard explicitly requires one or more of the actions listed (identify, map, manage or restore) for ecologically important water areas OR is restricted to onsite only (not areas affected by the site).	The standard explicitly requires all of the actions listed (identify, map, manage or restore) for ecologically important water areas, including areas that are affected by (including those on site) the site.
Nothing related to management of socio- culturally important water areas are referenced in the standard.	The standard references the concept of identifying or taking action on socio-culturally important water areas, but actions are not required.	The standard explicitly requires one or more of the actions listed (identify, map, manage or restore) for socio-culturally important water areas.	The standard explicitly requires all of the actions listed (identify, map, manage or restore) for socio-culturally important water areas, including areas that are affected by (including those on site) or affect the site. HCV counts here.
The standard contains no references to land or water-related land use conversion/restoration.	The standard contains references to land use or water-related land use conversion/restoration, but contains no requirements (or is highly restricted).	The standard explicitly requires actions with respect to land use conversion/restoration, but does not explicitly address water aspects OR explicitly addresses only limited water aspects.	The standard explicitly requires actions with respect to land use conversion/restoration, and explicitly addresses water aspects.
No references to rare, threatened and endangered species.	The standard contains references to identify or protect "species", but contains no explicit requirements OR requirements are very limited in nature/ scope.	The standard explicitly requires actions with respect to rare, threatened or endangered species, but does reference freshwater species OR explicitly addresses only limited aspects (e.g. identification, but not management). Generic HCV references are scored as a 2; IUCN references are scored as a 3.	The standard explicitly requires actions to identify and protect rare, threatened or endangered freshwater species. IUCN or CITES references are scored as a 3.
No references to invasive species.	Invasive species are referenced, but no specific requirements are outlined OR requirements are very limited in nature/ scope.	Invasive species are referenced and actions are explicitly required, but aquatic invasive species are not singled out.	Aquatic invasive species are referenced and actions are explicitly required.

ANNEX C1: Coverage of water stewardship elements by select conventional agricultural sustainability standards

	Alliance for Water Stewardship	Aquaculture Stewardship Council (Tilapia)	Better Cotton Initiative	Bonsucro	Cotton Made in Africa	Fairtrade (Hired Labour)
	1	2	3	4	5	6
<b>1. Water Governance and Management</b>						
Legal Compliance	3	3	2	3	2	2
Land and Water Rights	3	2	3	3	0	2
Consideration of catchment dependencies	3	2	2	1	0	2
Consideration of catchment impacts (ESIA)	1	2	3	3	1	1
Adaptive water management plan	3	1	3	2	2	1
Transparency, Disclosure and Stakeholder Consultation	3	1	1	2	2	2
Dispute Resolution	1	2	1	3	2	2
Catchment Collective Action	3	0	3	0	0	2
Consideration of Supply Chain (Indirect Water Use)	3	1	0	1	0	1
Future Scenario & Resilience Planning	3	0	3	0	0	1
Water, Sanitation and Hygiene for workers	3	2	3	2	0	3
Catchment governance and policy engagement	3	0	2	0	0	3
<b>2. Water Balance</b>						
Quantitative water use information (monitoring)	3	0	2	2	3	3
Water use efficiency	3	0	3	3	2	3
Absolute or contextual water quantity limitations	1	2	1	2	3	1
<b>3. Water Quality Status</b>						
Qualitative water use information (monitoring)	3	3	2	2	0	2
Effluent management: fertilizer, pesticides & soil	3	2	3	3	2	3
Absolute or contextual water quality limitations	1	3	1	2	1	1
<b>4. Important Water-related Areas</b>						
Management of wetlands & water-related habitats	3	1	3	2	2	3
Management of Water-related Areas of Religious, Cultural or other Social Importance	3	2	2	2	0	3
Water-related Land Use Conversion and restoration	1	2	3	3	3	2
Rare, Threatened and Endangered Freshwater Species	2	2	3	3	0	2
Aquatic invasive species	1	1	0	0	0	2
<b>SUM</b>	<b>56</b>	<b>34</b>	<b>49</b>	<b>44</b>	<b>25</b>	<b>47</b>
<b>1. Water Governance</b>	2.3	1.1	1.9	1.4	0.6	1.6
<b>2. Water Balance</b>	2.3	0.7	2.0	2.3	2.7	2.3
<b>3. Water Quality Status</b>	2.3	2.7	2.0	2.3	1.0	2.0
<b>4. Important Water-related Areas</b>	2.0	1.6	2.2	2.0	1.0	2.4

Global Coffee Platform (formerly 4C)	Global G.A.P.	International Sustainability & Carbon Certification	Linking Environment and Farming	ProTerra	Roundtable on Sustainable Biomaterials	Roundtable on Sustainable Palm Oil	Round Table on Sustainable Soy	SAI Platform Farm Sustainability Assessment 2.0	Sustainable Agriculture Network	Sustainable Rice Platform	Utz	AVERAGES
7	8	9	10	11	12	13	14	15	16	17	18	
<b>1. Water Governance and Management</b>												
2	3	3	2	2	2	2	2	3	2	2	2	2.3
1	1	3	0	2	3	3	2	2	2	1	2	1.9
1	3	2	2	0	3	2	2	2	1	2	2	1.8
1	3	3	3	2	3	3	3	1	3	2	2	2.2
1	3	3	3	2	3	3	3	2	3	2	2	2.3
0	1	2	2	2	3	3	2	0	2	1	0	1.6
1	2	2	1	2	3	2	2	1	2	0	1	1.7
0	2	1	0	0	3	1	2	1	2	1	0	1.2
1	1	1	0	2	0	1	0	1	1	0	0	0.8
0	1	1	0	3	0	0	1	0	3	3	3	1.2
2	3	3	0	2	2	2	2	3	3	0	3	2.1
0	0	1	0	1	1	0	1	0	0	1	1	0.8
<b>2. Water Balance</b>												
1	2	3	2	2	3	2	2	1	2	2	2	2.1
2	2	3	2	3	3	2	3	3	2	2	3	2.4
2	1	2	0	2	3	2	2	1	1	1	1	1.6
<b>3. Water Quality Status</b>												
2	3	3	3	3	3	2	2	2	2	2	2	2.3
2	3	3	3	3	3	2	3	3	3	3	2	2.7
2	2	1	1	2	3	2	2	0	2	2	2	1.7
<b>4. Important Water-related Areas</b>												
2	2	3	3	2	3	3	3	2	3	1	2	2.4
0	1	2	1	2	1	3	3	0	2	0	2	1.6
1	1	3	0	3	3	3	3	3	3	2	2	2.3
2	1	3	1	2	2	2	2	1	2	0	2	1.8
0	0	2	0	2	2	2	2	1	3	3	0	1.2
<b>26</b>	<b>41</b>	<b>53</b>	<b>29</b>	<b>46</b>	<b>55</b>	<b>47</b>	<b>49</b>	<b>33</b>	<b>49</b>	<b>33</b>	<b>38</b>	
0.7	1.6	1.8	0.9	1.4	1.9	1.6	1.6	1.3	1.7	1.1	1.3	1.4
1.7	1.7	2.7	1.3	2.3	3.0	2.0	2.3	1.7	1.7	1.7	2.0	2.0
2.0	2.7	2.3	2.3	2.7	3.0	2.0	2.3	1.7	2.3	2.3	2.0	2.2
1.0	1.0	2.6	1.0	2.2	2.2	2.6	2.6	1.4	2.6	1.2	1.6	1.8

	Bioland	China Organic Standard	EU Organic (Plant & Livestock)	International Federation of Organic Agriculture Movements	Global Organic Textile Standard	Naturland (Production)	USDA Organic	AVERAGES
	19	20	21	22	23	24	25	
<b>1. Water Governance and Management</b>								
Legal Compliance	2	0	3	1	2	2	1	1.6
Land and Water Rights	2	2	0	2	1	3	0	1.4
Consideration of catchment dependencies	0	0	1	1	0	3	0	0.7
Consideration of catchment impacts (ESIA)	2	2	0	2	0	2	0	1.1
Adaptive water management plan	0	2	2	0	2	3	2	1.6
Transparency, Disclosure and Stakeholder Consultation	1	0	0	0	0	2	0	0.4
Dispute Resolution	0	2	0	0	0	0	0	0.3
Catchment Collective Action	0	0	0	0	0	2	0	0.3
Consideration of Supply Chain (Indirect Water Use)	0	1	1	1	0	1	1	0.7
Future Scenario & Resilience Planning	0	0	0	0	0	2	0	0.3
Water, Sanitation and Hygiene for workers	0	2	0	2	2	2	0	1.6
Catchment governance and policy engagement	0	0	0	0	0	1	0	0.1
<b>2. Water Balance</b>								
Quantitative water use information (monitoring)	1	1	0	1	2	3	0	1.1
Water use efficiency	2	2	0	2	2	3	0	1.6
Absolute or contextual water quantity limitations	1	2	0	2	0	2	0	1.0
<b>3. Water Quality Status</b>								
Qualitative water use information (monitoring)	1	2	1	1	2	2	1	1.4
Effluent management: fertilizer, pesticides & soil	2	2	2	2	3	3	2	2.3
Absolute or contextual water quality limitations	2	3	1	2	3	2	1	2.0
<b>4. Important Water-related Areas</b>								
Management of wetlands & water-related habitats	2	3	3	2	0	2	2	2.0
Management of Water-related Areas of Religious, Cultural or other Social Importance	1	0	0	1	0	0	0	0.3
Water-related Land Use Conversion and restoration	0	0	0	2	0	1	0	0.4
Rare, Threatened and Endangered Freshwater Species	0	0	0	1	1	0	0	0.3
Aquatic invasive species	1	0	0	0	0	1	0	0.3
<b>SUM</b>	<b>20</b>	<b>26</b>	<b>14</b>	<b>25</b>	<b>20</b>	<b>42</b>	<b>10</b>	
<b>1. Water Governance</b>	0.5	0.8	0.5	0.6	0.5	1.6	0.3	0.7
<b>2. Water Balance</b>	1.3	1.7	0.0	1.7	1.3	2.7	0.0	1.2
<b>3. Water Quality Status</b>	1.7	2.3	1.3	1.7	2.7	2.3	1.3	1.9
<b>4. Important Water-related Areas</b>	0.8	0.6	0.6	1.2	0.2	0.8	0.4	0.7

List of Abbreviations

4C	4 (Common Code for the Coffee Community) Coffee Association	ITC	International Trade Centre
AWS	Alliance for Water Stewardship	IWRM	Integrated Water Resources Management
BCI	Better Cotton Initiative	LCA	Life Cycle Analysis
CAT	Certification Assessment Tool	RSPO	Roundtable on Sustainable Palm Oil
CoC	Chain of Custody	RTRS	Roundtable on Sustainable Soy Association
COD	Chemical Oxygen Demand	RSB	Roundtable on Sustainable Biomaterials
CmiA	Cotton made in Africa	SAI	Sustainable Agriculture Initiative
ESIA	Environment and Social Impact Assessment	SAN	Sustainable Agriculture Network
EU	European Union	SRP	Sustainable Rice Platform
FAO	United Nations Food and Agriculture Organisation	SSI	State of Sustainability Initiatives
FPIC	Free Prior and Informed Consent	T4SD	Trade for Sustainable Development
GLOBALG.A.P.	Global Good Agricultural Practice	WASH	Access to safe drinking water, adequate sanitation, and hygiene awareness
GRSB	Global Roundtable for Sustainable Beef	WBCSD	World Business Council on Sustainable Development
HCV	High Conservation Value	WF	Water Footprint
HCVRN	High Conservation Value Resource Network	WFN	Water Footprint Network
IFOAM	International Federation of Organic Agriculture Movements	WWF	World Wide Fund for Nature
ISEAL	International Social and Environmental Accreditation and Labelling (Alliance)	UN	United Nations
ISO	International Organisation for Standardization	USDA	United States Department of Agriculture

List of Figures, Tables and Boxes

Figure 1: Global Irrigated Land Facing Water Risk / Source: WWF Water Risk Filter ( <a href="http://waterriskfilter.panda.org/">http://waterriskfilter.panda.org/</a> )	8
Figure 2: Water Stewardship Coverage by Outcome Across Assessed Standards	16
Table 1: Scoring system for water stewardship coverage	12
Table 2: Summarized version of the Water Stewardship Assessment Framework	13
Table 3: Standards updates since 2015	14
Table 4: Coverage of water stewardship issues in assessed conventional agricultural standards	17
Table 5: Summary scores for agricultural sustainability standards by water stewardship outcomes	18
Table 6: Summary scores for agricultural sustainability standards by water stewardship outcomes	20/21
Box A: Shifting landscape of certification	9
Box B: Irrigation efficiency and the Jevons Paradox	19
Box C: Context-based water targets	25
Box D: Ensuring good intentions result in greater impacts	26
Box E: Potential collaboration between GLOBALG.A.P. and AWS – Integrating water stewardship into Good Agricultural Practices worldwide	27
Box F: Harnessing tools to explore water risk in agricultural supply chains – Water Risk Filter	28

Footnotes

- 1) WWF generally refers to “standards and certification schemes” in a stricter sense than is used in this report. This report extends the notion of “standards” to include various agricultural sustainable sourcing programs/initiatives/tools that we generally do not classify as a “standard and certification scheme” but that do get used by companies in a similar manner. For more details, please see: [http://d2ouvy59p0dg6k.cloudfront.net/downloads/wwf\\_principles\\_for\\_standards\\_and\\_certification\\_schemes\\_\\_external\\_version.pdf](http://d2ouvy59p0dg6k.cloudfront.net/downloads/wwf_principles_for_standards_and_certification_schemes__external_version.pdf)
- 2) This report focuses in-depth on freshwater. WWF’s Certification Assessment Tool provides a broader analysis for various areas and the system itself, and is recommended for general strengthening of standard systems. For more details, please see: [http://d2ouvy59p0dg6k.cloudfront.net/downloads/wwf\\_certification\\_assessment\\_tool\\_2015\\_final.pdf](http://d2ouvy59p0dg6k.cloudfront.net/downloads/wwf_certification_assessment_tool_2015_final.pdf)
- 3) UN Water statistics
- 4) Living Planet Index 2016
- 5) NB: It is recognized that the list of standards is not like-for-like so the 2015-2017 coverage comparison in Table 4; nevertheless it was included to illustrate general coverage and trends. For a direct, like-for-like comparison, please see Table 6.
- 6) <https://www.isealliance.org/online-community/blogs/eight-certifications-sign-agreement-to-drive-pesticide-reduction>



**Why we are here**

To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

[www.de](http://www.de) | [info@wwf.de](mailto:info@wwf.de)

**You would like to support  
the work of WWF?**

Donation account

IBAN: DE06 5502 0500 0222 2222 22

Bank für Sozialwirtschaft Mainz

BIC: BFSWDE33MNZ

**WWF Deutschland**

Reinhardtstr. 18  
D-10117 Berlin | Germany

Tel.: +49(0)30 311 777 700

Fax: +49(0)30 311 777 888