

CONCRETE SUSTAINABILITY COUNCIL



# ANNUAL REPORT 2021



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# ANNUAL REPORT 2021

Dear Stakeholders,

For many of us, 2021 was marked again by challenges in the context of the COVID-19 pandemic. In this situation, we kept our focus on rolling-out CSC-certifications for concrete and its supply chain, and we are particularly proud of being able to look back at another successful year for the CSC with several highlights:

- The CSC Management Team was complemented by Cynthia Imesch, our new CSC Coordinator and Sustainability Manager, and by Leo Dekker, our new CSC Technical Advisor.
- The CSC continued to grow its membership base and was able to welcome the National Ready Mixed Concrete Association NRMCA as the new CSC Regional System Operator for the USA. Furthermore, two new certification bodies based in Germany joined the CSC.
- CSC System version 2.1 was successfully launched in January 2021. This development was key for the continuous increase of annual certifications to a new record high of 240 in 2021. This led to more than 550 active certificates, an increase of around 40% compared to 2020.
- Recognition was renewed in different Green Building Labels for CSC version 2.1 and was achieved for the first time in ÖGNI, the leading Green Building Label in Austria managed by the Austrian Green Building Council.
- After an intense preparation phase, the new CSC CO<sub>2</sub>-module development was successfully finalized. This module will be launched in January 2022 and for the first time enable CSC certified concrete suppliers to tag low CO<sub>2</sub> concrete through a dedicated, third party verified label.

The results of the certifications performed in 2021 with CSC system version 2.1 were monitored and evaluated and are shared in this report. Insights gained through the evaluation process will be used for future improvements of the CSC certification system.

As the operator of the first and leading certification system for responsibly sourced concrete of global relevance, the CSC is proud of its contribution to making concrete and its supply chain even more sustainable.

Yours sincerely,



  
**Christian Artelt**  
Chair



  
**Michael Scharpf**  
Vice-Chair

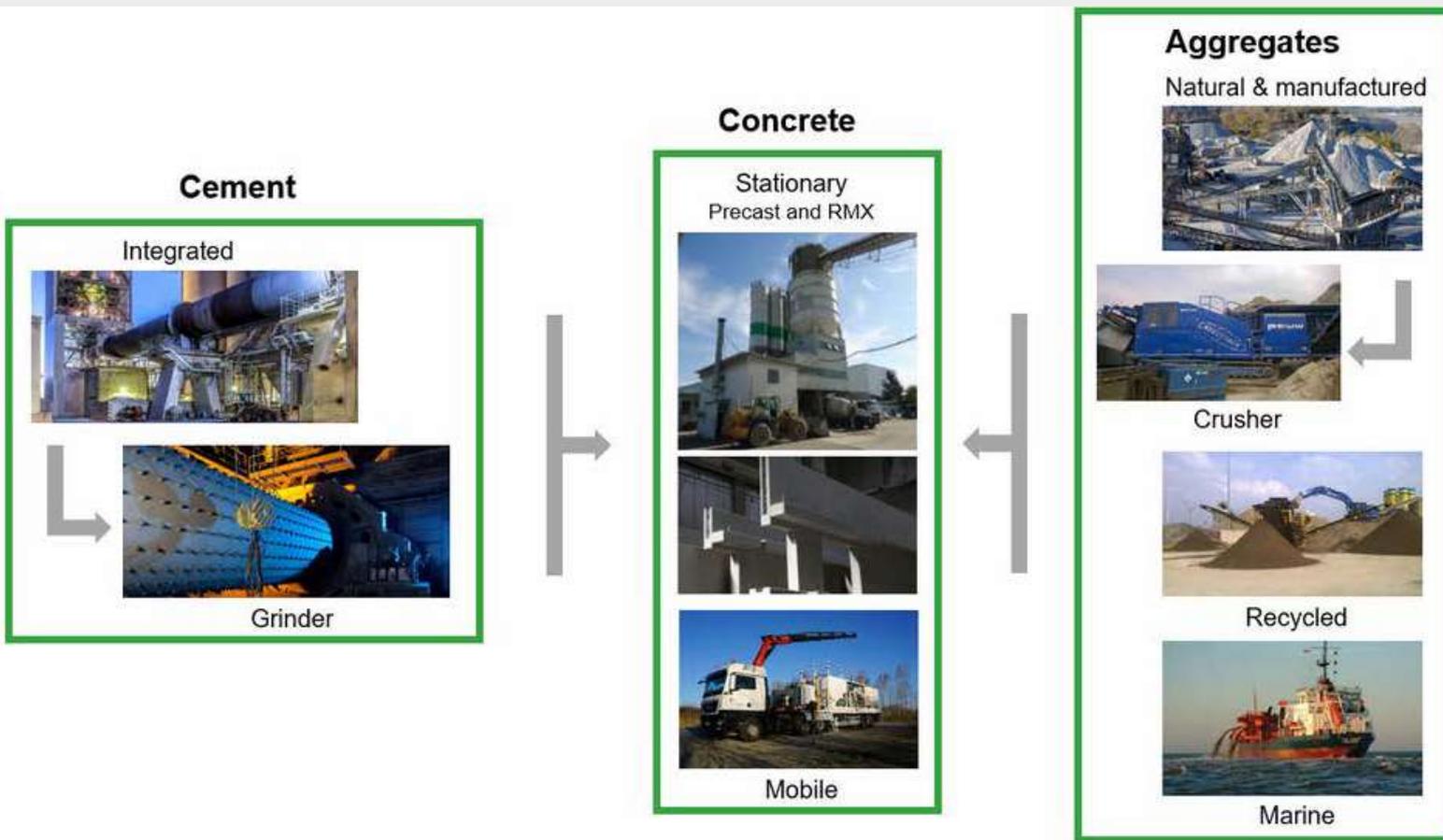


Fig.2.1: CSC certification scope

# 2 CSC CERTIFICATION

## 2.1 Scope of Certification

The CSC system is a product certification system, which practically targets the certification of production plants. Typically, the certification applies to all products manufactured and supplied by the respective plant, except from the voluntary modules for recycling and (starting 2022) low CO<sub>2</sub>-concrete, which apply to a defined product range of a plant.

Ready-mix concrete plants and precast concrete plants can obtain a “CSC certificate”. Cement and aggregate suppliers can obtain a “CSC supplier certificate”. Geared towards the comprehensive coverage of the supply chain, CSC supplier certificates are fully recognized in the CSC concrete certification.

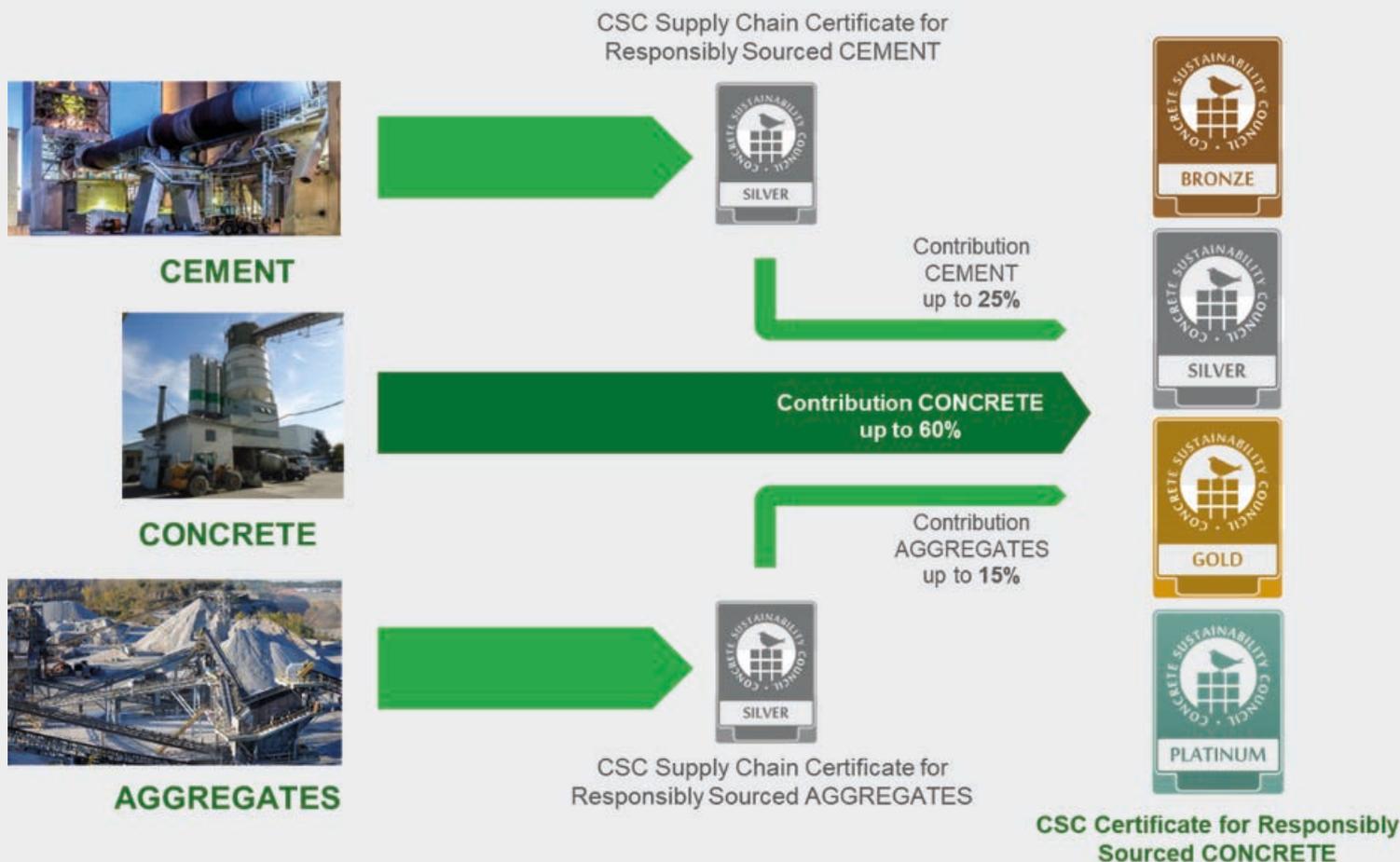


Fig.2.2: CSC scoring principles

## 2.2 Scoring & Certification levels

The CSC certification system follows the concept of continuous improvement. The system currently offers four certification levels (Bronze, Silver, Gold and Platinum) to foster continuous improvement.

For certifying concrete plants, the certification level obtained is the result of a scoring system, considering the individual scores from the concrete plant, and the weighted average from its CSC certified cement and aggregates suppliers. Certifying plants need to comply with all prerequisites (see section 2.3), plants aiming to certify at the level Silver or higher furthermore need to fulfill several mandatory criteria

## 2.3 Content of CSC certification

Each plant undergoing CSC certification must fulfill a certain number of prerequisites to obtain a CSC certificate. Provided the prerequisites are met, it can score points in the following categories:

- M - Management;
- E - Environment;
- S - Social;
- B - Economic;
- C - Supply chain.

An overview of the credits applicable in CSC version 2.1 is shown in the figure 2.3. Some of the credits or criteria only apply to the certification of a specific part of the supply chain, such as “E9 Secondary fuels” to clinker producing plants.

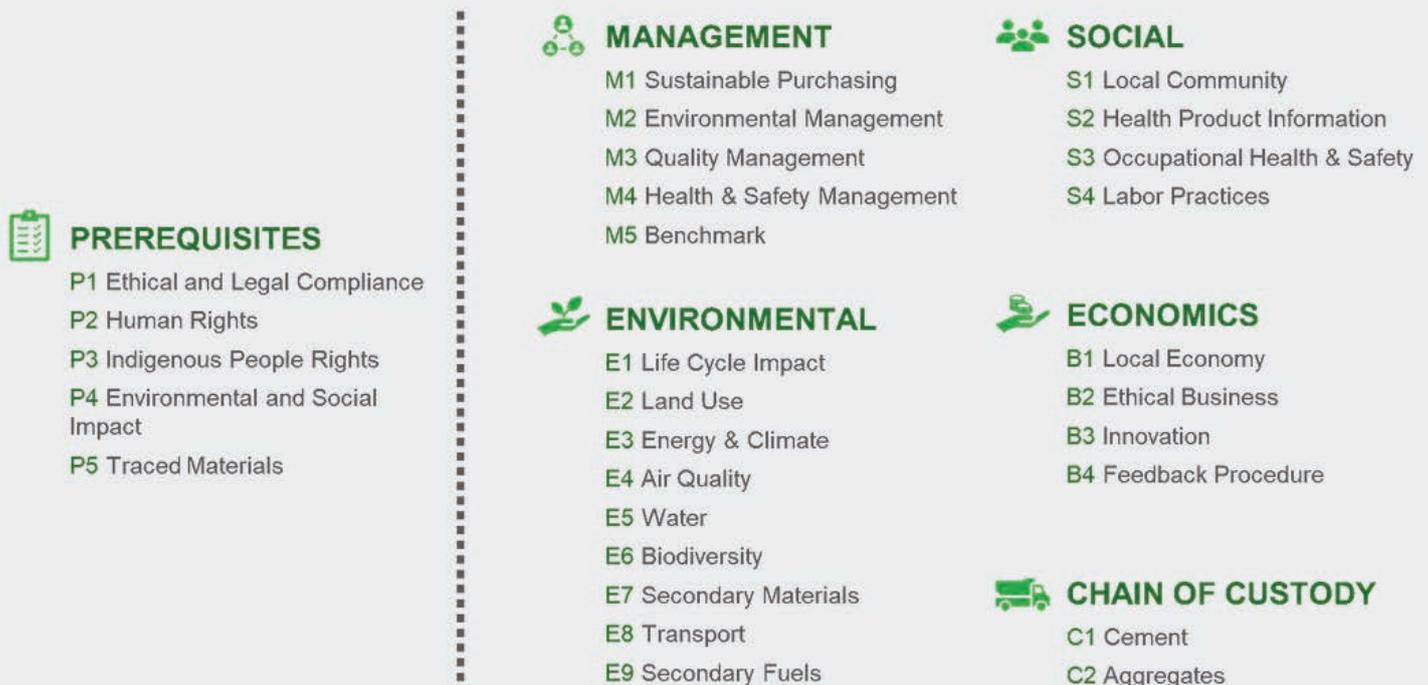


Fig.2.3: Content of CSC certification



# 2.4 The R-Module

This new module is a product certification that enables concrete suppliers to label RC-concrete with a recycled aggregate content of 10% or higher. The R-module is available for CSC-Silver (or higher) certified concrete plants.



### PREREQUISITES

- R1 Responsible Sourcing
- R2 Traced R-Material Supply
- R3 Recycled Material Consumption
- R4 Quality Management
- R5 Minimum R-Material Content

Fig.2.4: R-Module certification content





Fig.2.5: The CSC system's coverage of the SDGs

## 2.5 Supporting the implementation of the United Nations Sustainable Development Goals (SDGs)

CSC certification follows a holistic approach and requires compliance with five fundamental prerequisites and a wide range of social and environmental performance indicators, including "occupational Health & Safety", "Labor practices", "Land use", "Energy & climate", "Air emissions", "Water", "Biodiversity", "Secondary materials", and "transport". With this, the CSC aims to contribute to the implementation of the SDGs in the concrete sector and its supply chain.

Most of the SDGs are directly or indirectly addressed, namely SDG 3 "Good health and well-being", 6 "Clean water and sanitation", 7 "Affordable and clean energy", 8 "Decent work and economic growth", 9 "Industry, innovation and infrastructure", 10 "Reduced inequalities", 11 "Sustainable cities and communities", 12 "Responsible consumption and production", 13 "Climate action", 14 "Life below water", 15 "Life on land", and 16 "Peace, justice and strong institutions".

# 3 CREDIBILITY OF THE CSC CERTIFICATION SYSTEM

The aim of the CSC is to achieve a positive impact on the social, environmental and economic practices of concrete, cement and aggregate producers. Therefore, the CSC certification system is based on the 10 ISEAL credibility principles:

## 1. Sustainability

The CSC certification system aims to achieve several clearly identified sustainability objectives, namely:

- Improving the sustainable use of concrete by promoting responsible practices throughout the value chain and incentivizing continuous improvement;
- Ensuring transparency in the concrete sector by making sustainable practices more visible and enable organizations to demonstrate leadership;
- Raising the public awareness regarding the sustainability of the concrete sector and its products;
- Obtaining tangible benefit for implementing responsible sourcing by receiving recognition for the supply of CSC certified concrete in green building and green infrastructure rating systems such as BREEAM, DGNB, LEED, ÖGNI, ENVISION;
- Obtaining recognition in “green procurement” government policies and policies for social procurement.

## 2. Continuous Improvement

Raising the bar for obtaining CSC certification is an important lever to continuously improve responsible sourcing practices. This is achieved via a number of dedicated measures, including

- regular discussions on the level of the CSC Technical Committee;
- the CSC’s annual report including the Regional System Operators’ (RSOs’) and Certification Bodies’ (CBs’) annual feedback;
- regular harmonization meetings between CBs;
- exchange meetings with RSOs;
- exchanges with companies undergoing certifications and certificate holders;
- stakeholder events with Civil Society Organizations and Labor Organizations.



### 3. Relevance

Relevance of credits and criteria covered by the system are of highest importance to ensure “fitness for purpose” and progress in responsible sourcing practices. The topics covered by the certification system were consequently identified with the support of a broad range of stakeholders:

- Amongst the environmental key-topics identified are the reduction of CO2 emissions, energy and water consumption, recycling and the use of secondary materials. In the supply chain, i.e. the production of cement and aggregates, biodiversity was identified as another important topic to be carefully considered.
- Amongst the key social topics identified are relations with the local community, occupational health and safety, and labor practices.
- In the field of economics, local economy, ethical business practices and innovation were identified as particularly important.

The CSC system allows adaptations to ensure local applicability.



## 4. Rigor

The system focuses on topics relevant for responsible sourcing. All evidence used for certification first needs to be uploaded in the CSC assessment tool, the so-called “CSC Toolbox”. In a second step, the uploaded evidence is assessed and validated by an independent CB before issuing the certificate.

## 5. Engagement

The system was developed and updated in a collaborative approach with involvement from internal stakeholders - i.e. enterprises, industry associations and CBs - and external stakeholders - i.e. CSOs, labor organizations, green building councils (GBCs) and academics.

## 6. Impartiality

The CSC has a broad range of internal stakeholders comprising concrete, cement and aggregate producers, industry associations, and CBs. Impartiality is ensured by the organization’s Governance, namely

- a General Assembly (GA) with equal voting rights for all members;
- the setup of the Executive Committee (ExCo) ensures appropriate representation of all internal stakeholders;
- the CSC Advisory Committee providing the direct voice of social and environmental stakeholder organizations;
- a dedicated grievance management procedure.



## 7. Transparency and

## 8. Accessibility

All relevant information regarding the CSC, its Governance and the certification system can be accessed via the CSC's homepage: [www.csc.eco](http://www.csc.eco)

## 9. Truthfulness

CSC intends to secure truthfulness, and thus confidence in products from CSC certified plants via a framework of dedicated measures:

- The CSC formally requests that claims and communications relating to CSC certification and the use of the logo are in line with the respective CSC guidance document;
- a dedicated procedure is in place to report false claims, false use of the CSC trademark and logo;
- the CSC regularly checks the use of the CSC logo and trademark, e.g. via internet spot-checks;
- the CSC reserves the right to take legal action against any false/deceptive claims including any misuse of the CSC logo.



## 10. Efficiency

CSC certification is aligned with ISO standards, namely ISO 14001, ISO 18001, ISO 9001, ISO 26000 and other standards. This makes the certification process efficient for companies, who are already following those standards. The CSC continuously seeks a dialogue with green building and green infrastructure labels. Recognition has been achieved within BREEAM, DGNB and ENVISION and is an important driver to create value for CSC customers. Recognition by such systems can become an important success factor for the CSC, leading to a growing number of CSC certifications, such as demonstrated in the Netherlands and in Germany.

Local promotion of the CSC certification system among stakeholders other than the concrete sector and its supply chain is key to implementing the CSC system throughout the construction value chain. Local promotion is secured through "system ownership" via RSOs who proactively engage with green building councils and public authorities.



# 4 CSC IN NUMBERS

## 4.1 CSC-certifications

Since the launch of CSC-certification in January 2017, 698 CSC certificates have been awarded (see Table 4.1). The number of annual certifications continued to increase to a record high of 240 in 2021, leading to an increase of 25% compared to 2020.

COUNTA of Date of certificate Date of certificate - Year	Certificate type						
	Aggregates	Cement	Concrete	Grinder	Mobile concrete	Recycled agg.	Grand Total
2017	5	4	54				63
2018	3	21	50				74
2019	28	11	88			2	129
2020	36	12	138	3	1	2	192
2021	50	32	155	2	1		240
<b>Grand Total</b>	<b>122</b>	<b>80</b>	<b>485</b>	<b>5</b>	<b>2</b>	<b>4</b>	<b>698</b>

Table 4.1 Number of certificates issued per year and per segment

156 out of the 240 certificates ( $\hat{=}$  65%) awarded in 2021 were concrete plant certificates, one of them for a mobile concrete plant.

50 supplier certificates ( $\hat{=}$  21%) were awarded for aggregate production sites, and 34 supplier certificates ( $\hat{=}$  14%) were awarded for cement plants, 2 of them for cement grinding plants.

21 ( $\hat{=}$  9%) of the 2021 certificates were awarded at the level “Bronze”, 56 certificates ( $\hat{=}$  23%) at the level “Silver”, 137 certificates ( $\hat{=}$  57%) at the level “Gold”, and 26 certificates ( $\hat{=}$  11%) at the level “Platinum”.

Amongst the 240 CSC certification projects executed in 2021 were 147 in Germany, 40 in the Netherlands, 29 in Belgium, 8 in Italy, 4 in Latin America and in the U.S.A, 3 in Turkey, 3 in Switzerland, and 2 in Spain. This increases the number of active certificates to 541.

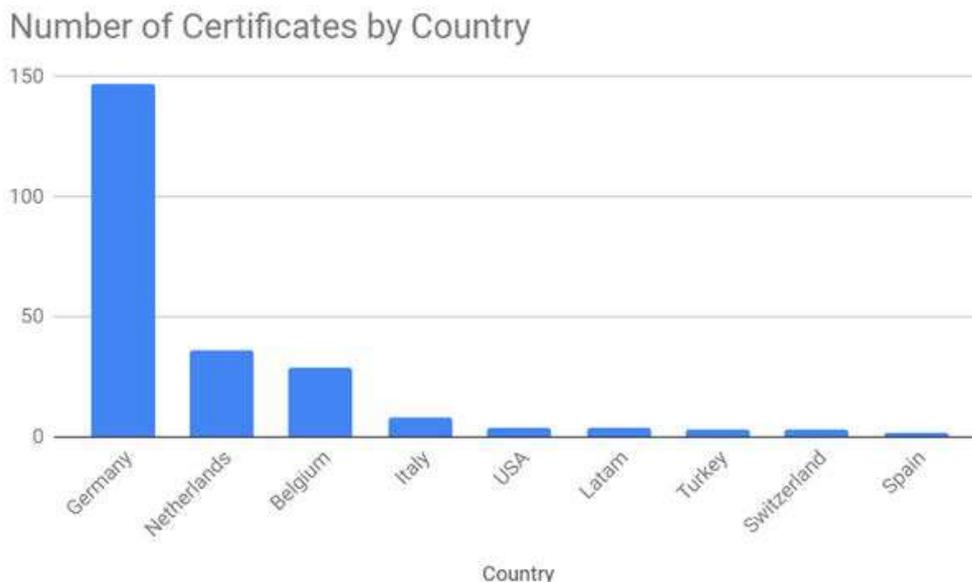


Fig 4.1 Certificates by country issued in 2021

## 4.2 CSC R-Module certifications

After its launch mid-2020, three R-module certifications were successfully achieved before the end of the year; two of them in Germany, and one in the Netherlands. In 2021, 10 R-module certifications were awarded in Germany and 1 in the Netherlands

# 5 CERTIFICATES HOLDERS' RESPONSIBLE SOURCING PERFORMANCES

This section provides an overview on the achievements of plants certified in 2021 under the latest CSC system version 2.1. The data allows gaining insight into the implementation status of sustainability practices in the concrete and aggregate sector and is used to steer future updates of the CSC certification system.



## 5.1 Concrete Producers

83 concrete plants were awarded in 2021 with a CSC certificate version 2.1.

### 5.1.1 Management Criteria



Fig 5.1 Concrete: Management criteria-ratio of criterion achievement

Fig. 5.1 provides insight into the achievement of management related certification criteria: Concerning sustainable purchasing practices it can be seen that nearly all CSC certified concrete plants have a purchasing policy in place (→ M1.01) covering social and environmental aspects, that they carry out supplier assessments (→ M1.02) and include responsible sourcing as a criterion in their procurement process (→ M1.06). Illustrating the principles of responsible sourcing to relevant employees via training (→ M1.04) remains an area for further improvement for around 20% of the plants.

All certified plants have documented management systems in place addressing environmental- (→ M2.01) quality- (→ M3.01), and health and safety (→ M4.01) related issues. Significant progress was made in the implementation of documented management systems over the past years as in CSC certification system version 2.1 this is now requested for all plants undergoing CSC certification at the level Silver or higher.



At the same time, low to moderate achievement rates of criteria M2.02, M3.02 and M4.02 clearly indicate that the implementation of certified management systems such as ISO 14001, ISO 9001 and ISO 45001 still is in an early stage.

In 2021 only 18% of the concrete plants undergoing CSC certification according to system version 2.1 complied with criterion M2.02. Companies can consequently put more efforts into having a certified EMS in place.



## 5.1.2 Environmental Criteria

Fig. 5.2 provides an overview on the achievement ratio of certification criteria relating to environmental issues: The achievement of environmental criteria shows a mixed picture. The overall fulfillment rate of criteria for Land use such as for Responsible land use (→E2.02) or for the Protection of pollution (→E2.03) is 100%. Also, the achievement rate of the criteria addressing air quality (→ E4) is elevated.

However, there is room for improvement in other criteria: The criterion E2.01 on Land requiring a Policy to avoid globally or nationally important sites, is only achieved by 84% of the plants undergoing certification. EPDs are not yet released by every certified concrete producer (→ E1.03 and E1.04). Furthermore, for around 40 % of the certified plants there is the opportunity to engage into reporting on GHG emissions (→ E3.03, and E3.04) and on water use (→ E5.04, E5.05), respectively. Other areas providing improvement opportunities include optimizing the use of secondary materials (→ E7.05 and E7.06) and assessing and implementing clean transportation technologies and methods (→ E8.03).

The next Generation Trucks criterion (→E8.04) that has been added in version 2.1 rewards plants that are using trucks with innovative, CO2 emission reducing drive technology. Only 2 plants fully scored in this criterion, which is an indicator for the sectors' readiness to contribute to the transition of transportation.

Concrete: environment criteria - ratio of criterion achievement



- E1.02 Implementation of life cycle assessment (LCA)
- E1.03 Release of environmental product declarations (EPDs)
- E1.04 (EP) Reporting of product specific carbon emissions
- E2 Land Use**
- E2.01 Policy to avoid globally or nationally important sites
- E2.02 Responsible land use
- E2.03 Protection from pollution
- E3 Energy & Climate**
- E3.01 Climate policy
- E3.02 Monitoring of GHG emissions
- E3.03 Public reporting of monitoring results
- E3.04 Externally verified reporting of GHG emissions
- E3.06 CO2 emission reduction target
- E3.08 Energy reduction potentials
- E3.09 Achievement of CO2 emission reduction target
- E3.10 Implementation of energy reduction potentials
- E3.11 Energy saving awareness creation
- E3.13 Use of renewable electrical energy
- E4 Air Quality**
- E4.08 Clean air silos
- E4.09 Process and fugitive dust reduction measures
- E5 Water**
- E5.01 Water scarcity and impact
- E5.02 Water monitoring
- E5.03 Water target
- E5.04 Verification of water reporting
- E5.05 Report on water use and quality of discharged water
- E5.06 Action for reduction of water consumption
- E5.07 Action for improving the quality of discharged water
- E7 Secondary Materials**
- E7.01 Assessment of the availability of secondary materials
- E7.02 Policy on usage of secondary materials
- E7.03 Reporting on the use of secondary materials
- E7.04 Responsible processing of returned concrete
- E7.05 Optimized use of secondary materials
- E7.06 Optimized use of secondary materials on project level
- E7.07 (EP) Responsible processing of "non-concrete materials"
- E8 Transport**
- E8.01 Transport policy
- E8.02 Transport management system
- E8.03 Fuel saving awareness training
- E8.04 Next generation trucks

E3.13 1-4 points out of 5

Fig 5.2 Concrete: Environmental criteria- ratio of criterion achievement

### 5.1.3 Social criteria

Fig. 5.3 summarizes the achievement of certification criteria relating to social issues: good relationships with the surrounding community are important for concrete plants as many of them operate in industrial zones located near residential areas. Nonetheless, an improvement opportunity for around 7% of the certified concrete plants includes implementing a policy committing to engage with the local community on a regular basis (→ S1.01). Nearly 50% of the certified plants may still engage into a more active communication with the local community (→ S1.03) and around 12% of the plants remain with the opportunity to develop and implement a noise management plan (→ S1.04, S1.05).

Regarding labor practices – External control of social standard and compliance with human rights (→ S4.09) is clearly not yet state-of-the-art, whereas we see that compliance with the work life balance criterion S4.08 has increased compared to last year w. which is most probably related to employers’ mitigation measures, such as home office, offered to many of their employees in the context of the pandemic.

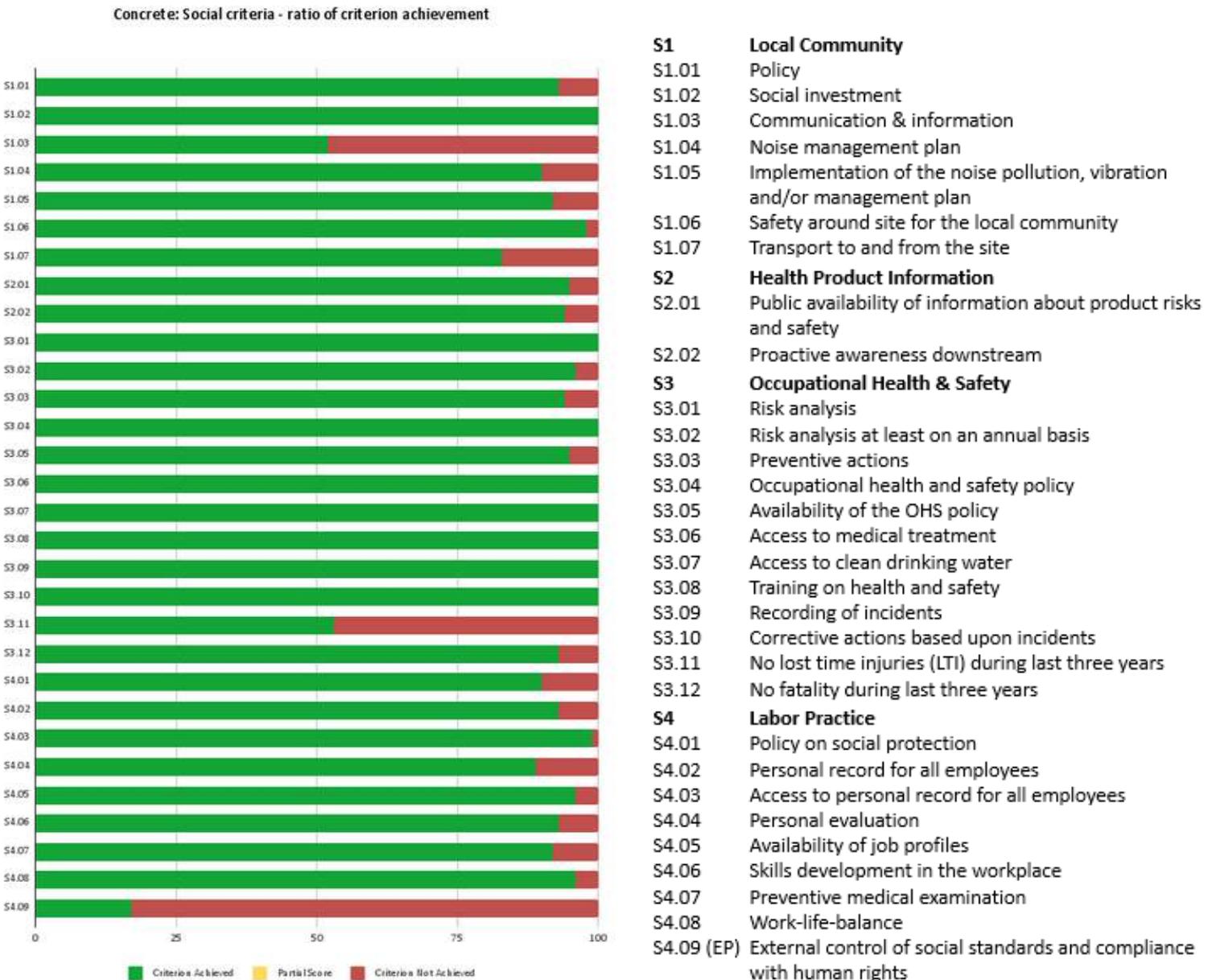


Fig 5.3 Concrete: Social Criteria- ratio of criterion achievement

### 5.1.4 Supply chain criteria

Fig. 5.4 summarizes the achievement of the supply chain criteria “C2.01 Cement” and “C2.02 Aggregates”. 0% achievement means that a CSC certified concrete plant does not use any CSC certified aggregates or cement, respectively. 100% achievement means that a CSC certified concrete plant uses 100% CSC certified aggregates or cement, and that the respective suppliers achieved a total scoring of 100%. Supplier scores lower than 100% always lead to an achievement rate of less than 100% in the concrete certificate, even if the complete supply is from certified producers.

According to fig. 5.4, 10% of the plants have no certified cement. In 2019, still 26% of the concrete plants certifying according to CSC version 2.0 did not use any CSC certified cement and it was 10% in 2020. Due to the increasing availability of CSC certified cement, in the Netherlands, Germany, Italy, and Turkey more than 70% of the concrete plants reached a scoring betwe

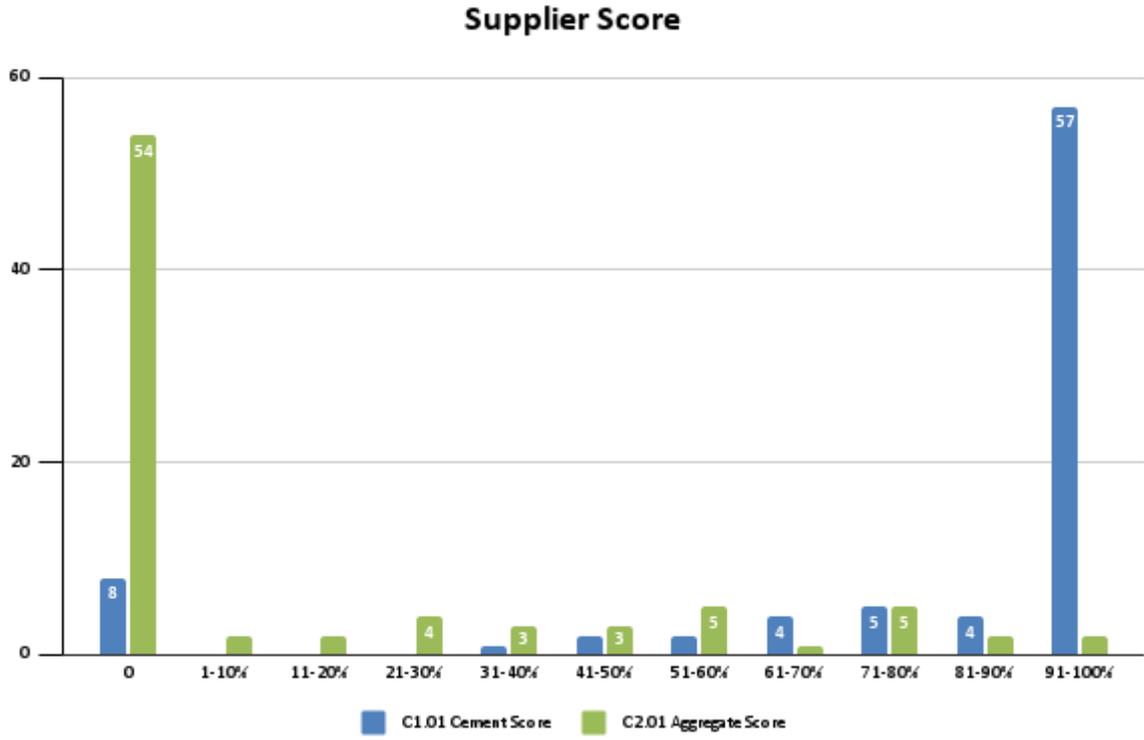


Fig 5.4 Concrete: Supply chain- ratio of criterion achievement

On the other hand, 65 % of the CSC-certified concrete plants use no CSC-certified aggregates, this relates to the limited availability of CSC certified aggregates in many regions. Overall, the aggregate supplier certificates show a slower uptake than cement, primarily due to a more fragmented situation in the aggregates market. However, as the number of certified aggregate producers is continuously increasing, we already see an increase compared to last year, and it is expected that the achievement ratio of the criterion C2.01 will continue to improve.





## 5.2 Aggregate Producers

7 Aggregate production sites were awarded in 2021 with a CSC supplier certificate version 2.1. Given the limited number of certifications, conclusions should be seen as preliminary.



### 5.2.1 Management Criteria

Fig. 5.5 provides insight into the achievement of management related certification criteria: Concerning sustainable purchasing (→ M1) there remains a number of improvements on training on responsible sourcing (→ M1.04).

Documented EMS (→M2.01), QMS (→M3.01) and HSMS (→M4.01) have been implemented by all newly certified aggregate producing sites. On the other hand, certified EMS (→M2.02) and in particular HSMS (→M4.02) are not yet implemented in all plants.

Finally, publishing annual performance data (→ M5) is also not yet common practice throughout the sector.

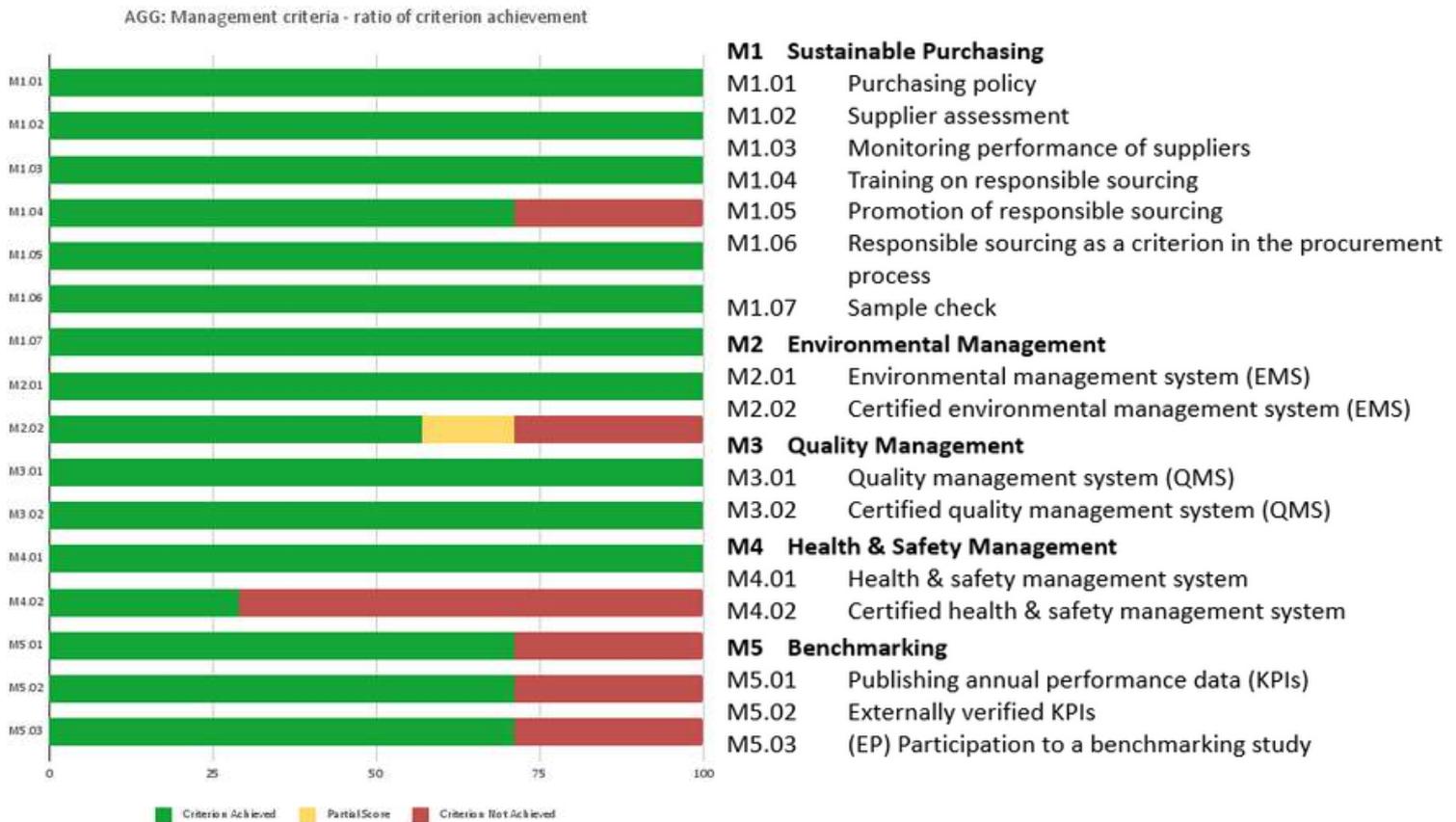


Fig 5.5 Aggregates Management Criteria- ratio of criterion achievement

## 5.2.2 Environmental criteria

Fig. 5.6 provides an overview on the achievement ratio of certification criteria relating to environmental issues: The achievement ratio of environmental criteria shows a mixed picture. The overall fulfillment rate of the criteria addressing land use (→ E2), air quality (→ E4), water (→ E5) and biodiversity (→ E6) is generally very elevated. Exceptions include the lack of opportunity to supply water to nearby communities (→ E5.08) Regarding the credit on transportation (→ E8), 100% of the newly certified sites have a transport policy and a transport management system in place(→ E8.01 and E8.02), whereas fuel saving awareness training was performed by 70%. However, only 28% of the production sites undergoing CSC certification in 2021 are making use of innovative trucks with CO2 emission reducing drive technology.

The new criterion E3.13 is addressing the use of renewable electrical energy and was only fulfilled by one plant. There is room for improvement and incentives being made in that area.



AGG: Environment criteria - ratio of criterion achievement



- E1 Life Cycle Impact**
  - E1.01 Sectoral environmental product declaration
  - E1.02 Implementation of life cycle assessment (LCA)
  - E1.03 Release of environmental product declarations (EPDs)
- E2 Land Use**
  - E2.01 Policy to avoid globally or national important sites
  - E2.02 Responsible land use
  - E2.03 Protection from pollution
- E3 Energy & Climate**
  - E3.01 Climate policy
  - E3.02 Monitoring of GHG emissions
  - E3.03 Public reporting of monitoring results
  - E3.04 Externally verified reporting of GHG emissions
  - E3.06 CO2 emission reduction target
  - E3.08 Energy reduction potentials
  - E3.09 Achievement of CO2 emission reduction target
  - E3.10 Implementation of energy reduction potentials
  - E3.11 Energy saving awareness creation
  - E13.13 Use of renewable electrical energy
- E4 Air Quality**
  - E4.09 Process and fugitive dust reduction measures
- E5 Water**
  - E5.01 Water scarcity and impact
  - E5.02 Water monitoring
  - E5.03 Water target
  - E5.04 Verification of water reporting
  - E5.05 Report on water use and quality of discharged water
  - E5.06 Action for reduction of water consumption
  - E5.07 Action for improving the quality of discharged water
  - E5.08 (EP) Supplying water to nearby communities
- E6 Biodiversity**
  - E6.01 Biodiversity policy
  - E6.02 Biodiversity assessment
  - E6.03 High biodiversity value area assessment
  - E6.04 Regular biodiversity value area assessment
  - E6.05 Biodiversity management / action plan
  - E6.06 Biodiversity impact assessment
- E8 Transport**
  - E8.01 Transport policy
  - E8.02 Transport management system
  - E8.03 Fuel saving awareness training
  - E8.04 (EP) Next generation trucks

\*not relevant for recycled aggregate producers, only producers of primary materials are considered in the evaluation

Fig 5.6 Aggregates: Environmental criteria - ratio of criterion achievement

## 5.2.3 Social criteria

Fig. 5.7 summarizes the achievement rates of certification criteria relating to social issues: The overall scoring in social credits is elevated. Good relationships with the surrounding community are well established as they are important to secure “the license to operate”. Criteria addressing occupational health and safety practices (→ S3) and fair and equitable treatment of the workforce (→ S4) are generally fulfilled. However, in several cases, additional effort can be made to further reduce the risk of accidents (→ S3.11).

The recently implemented exemplary performance criterion on external control of social standards and compliance with human rights (→ S4.09) is – as expected – very challenging and is achieved by only around 57% of the aggregate production sites undergoing certification. Meanwhile the rate of achievement increased compared to 2020 where it was only 30%.

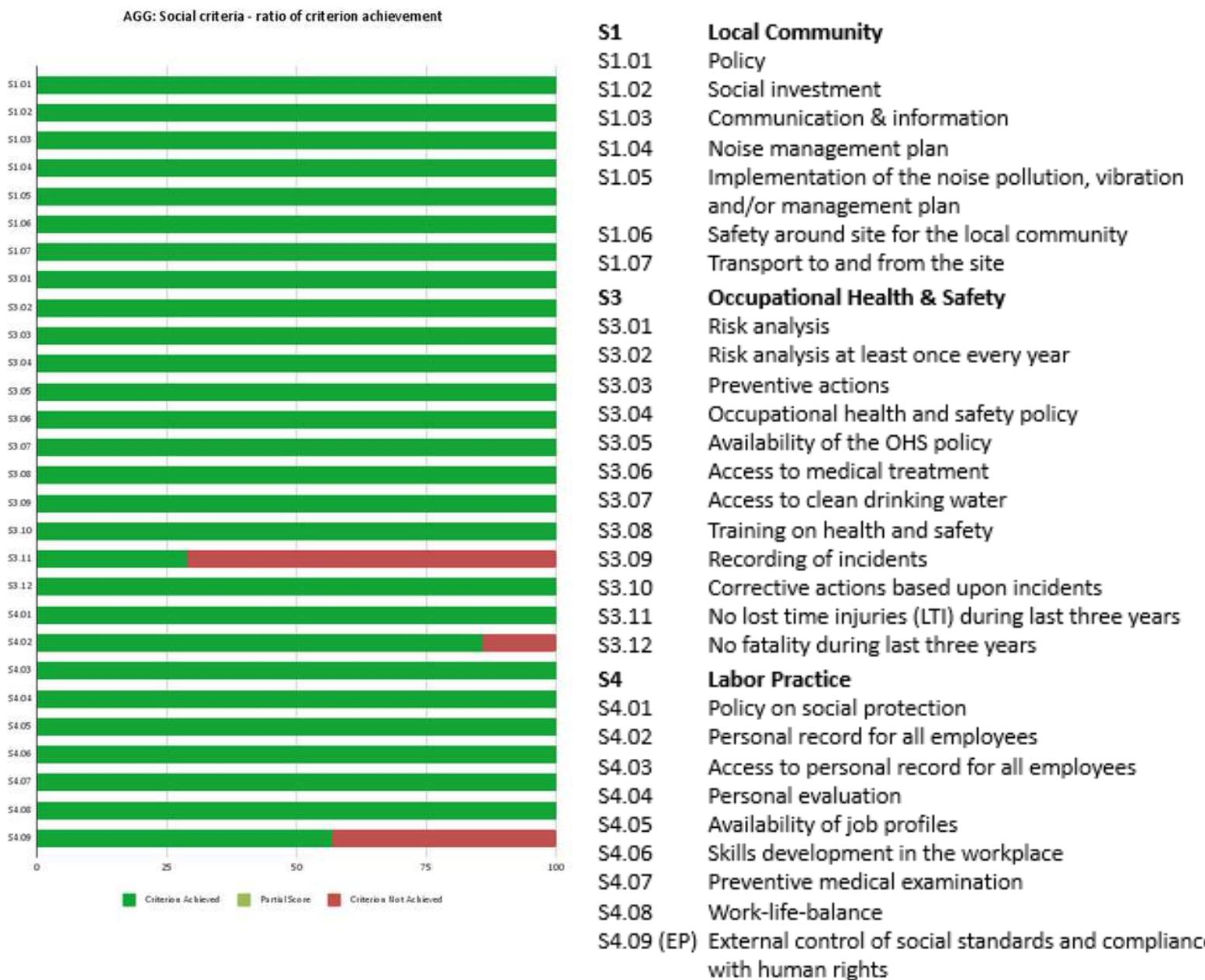


Fig 5.7: Aggregates: Social criteria - ratio of criterion achievement





## 5.3 Cement Producers

25 cement plants were awarded in 2021 with a CSC supplier certificate version 2.1.

### 5.3.1 Management Criteria

Fig. 5.8 provides insight into the achievement of management related certification criteria: Concerning sustainable purchasing (→ M1) there has been a major increase compared to 2020, as in 2021 all plants were complying with the Sustainable Purchasing criteria.

Clinker and cement production is performed in plants equipped with huge mills, kilns and other heavy machinery. This explains why documented management systems (→ M2.01, M3.01 and M4.01) are implemented in all plants. Certified QMS are also implemented in all plants and certified EMS (→M3.22) in nearly all plants. On the other hand, 48% of the plants certified in 2021 under CSC-system version 2.1 still do not have a certified HSMS system in place

Cement plants are in the spotlight of public attention due to the high amount of energy required for clinker production and the related CO2 emissions. Publishing annual performance data (→ M5) is consequently common practice nearly throughout the whole sector.



Fig 5.8: Cement: Management criteria - ratio of criterion achievement

## 5.3.2 Environmental Criteria

Fig. 5.9 provides an overview on the achievement ratio of certification criteria relating to environmental issues: The achievement ratio of environmental criteria shows a mixed picture with improvement opportunities in many credits.

CEM: Environment criteria - ratio of criterion achievement



- E1 Life Cycle Impact**
  - E1.01 Sectoral environmental product declaration
  - E1.02 Implementation of life cycle assessment (LCA)
  - E1.03 Release of environmental product declarations (EPDs)
  - E1.04 (EP) Reporting of product specific carbon emissions
- E2 Land Use**
  - E2.01 Policy to avoid globally or national important sites
  - E2.02 Responsible land use
  - E2.03 Protection from pollution
- E3 Energy & Climate**
  - E3.01 Climate policy
  - E3.02 Monitoring of GHG emissions
  - E3.03 Public reporting of monitoring results
  - E3.04 Externally verified reporting of GHG emissions
  - E3.05 Reporting to GNR database
  - E3.06 CO2 emission reduction target
  - E3.07 Science based CO2 emission reduction target
  - E3.08 Energy reduction potentials
  - E3.09 Achievement of CO2 emission reduction target
  - E3.10 Implementation of energy reduction potentials
  - E3.11 Energy saving awareness creation
  - E3.12 CO2 emissions
  - E3.13 Use of renewable electrical energy
- E4 Air Quality**
  - E4.01 Emission reduction targets
  - E4.02 Monitoring and reporting of emissions
  - E4.03 Verification of emission reporting
  - E4.04 NOx emissions
  - E4.05 SOx emissions
  - E4.06 Dust emissions
  - E4.07 Mercury emissions
  - E4.09 Process and fugitive dust reduction measures
- E5 Water**
  - E5.01 Water scarcity and impact
  - E5.02 Water monitoring
  - E5.03 Water target
  - E5.04 Verification of water reporting
  - E5.05 Report on water use and quality of discharged water
  - E5.06 Action for reduction of water consumption
  - E5.07 Action for improving the quality of discharged water
  - E5.08 (EP) Supplying water to nearby communities
- E6 Biodiversity**
  - E6.01 Biodiversity policy
  - E6.02 Biodiversity assessment
  - E6.03 High biodiversity value area assessment
  - E6.04 Regular biodiversity value area assessment
  - E6.05 Biodiversity management / action plan
  - E6.06 Biodiversity impact assessment
- E7 Secondary Materials**
  - E7.01 Assessment of the availability of secondary materials
  - E7.02 Policy on usage of secondary materials
  - E7.03 Reporting on the use of secondary materials
  - E7.05 Optimized use of secondary materials
- E8 Transport**
  - E8.01 Transport policy
  - E8.02 Transport management system
  - E8.03 Fuel saving awareness training
  - E8.04 (EP) Next generation trucks
- E9 Secondary Fuels**
  - E9.01 Use of restricted waste
  - E9.02 Assessment of alternatives
  - E9.03 Assessment of non-harmful alternative fuels
  - E9.04 Communication and stakeholder involvement

\*not relevant for cement grinders, only clinker producers are considered in the evaluation

Fig 5.9: Cement: Environmental criteria - ratio of criterion achievement

Some plants have not yet contributed (→ E1.01) or produced environmental product declarations (→ E1.03). This is a bit surprising as know-how for doing so (→ E1.02) seems available. Energy and climate (→ E3) related criteria are largely complied with. However, there is one quite important improvement opportunity, namely to set science-based CO2 emission reduction targets (→ E3.07)! Cement plants undergoing certification should continue reducing their production related CO2 emissions (→ E3.12) with this also increase the use of renewable electricity (→ E3.13).

CSC system version 2.0 introduced several challenging performance criteria for NOx (→ E4.04), SOx (→ E4.05), dust (→ E4.06) and mercury emissions (→ E4.06). Good news is that in 2021 the compliance level with these criteria increased by around 30% vs. 2020.

Compliance with criteria relating to water issues (→ E5) is generally very elevated at the exception of criterion E5.08: More than 80% of the plants face the lack of opportunity to supply water to nearby communities and consequently did not score in this exemplary performance criterion. Biodiversity (→ E6) is a very important topic when it comes to quarrying activities. The achievement ratio of cement plants undergoing CSC certification in 2021 was overall very satisfying. For the first time, all plants undergoing CSC-certification were carrying out biodiversity assessments (→ E6.02) and setting up biodiversity management plants (→ E6.05).

Furthermore, implementing a transport policy (→ E8.01) and a transport management system (→ E8.02) is now covered by all plants. It is without surprise that the new CSC version 2.1 criteria of addressing the use of next generation trucks (→ E8.04) was only achieved by 30% of the plants.



### 5.3.3 Social Criteria

Fig. 5.10 summarizes the achievement rates of certification criteria relating to social issues: The overall scoring in social criteria is very elevated. Good relationships with the surrounding community (→ S1) are well established as they are important to secure “the license to operate”. Criteria addressing occupational health and safety practices (→ S3) are generally fulfilled. However, in several cases, additional effort can be made to further reduce the risk of accidents (→ S3.11). Criteria relating to labor practices (→ S4) are mostly fulfilled and there was an improvement compared to 2020 where some plants remained with the opportunity to grant all employees access to their personal record (→ S4.03) and to implement an appraisal procedure (→ S4.04).

The recently implemented exemplary performance criterion on external control of social standards and compliance with human rights (→ S4.09) is – as expected – very challenging and is achieved by only around 56% of the cement production sites undergoing certification.

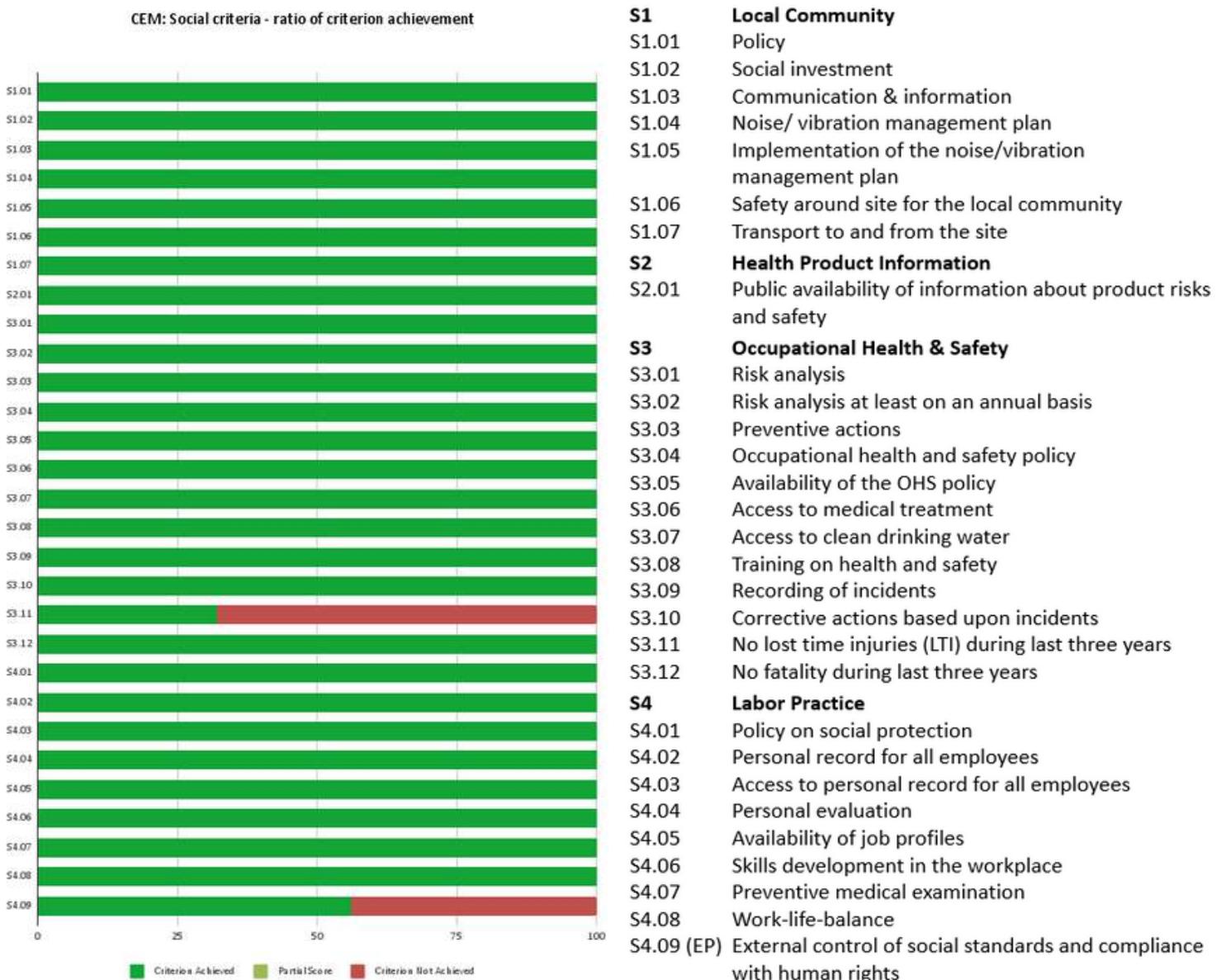


Fig 5.10: Cement: Social criteria - ratio of criterion achievement

## 5.4 General Remarks

CSC certification is frequently performed by concrete plants, aggregate production sites and by cement plants with the ambition to advance their sustainability practices and to improve their score. Consequently, their overall responsible sourcing performance is likely to exceed the sector's average performance and to continue increasing over time



# 6 INNOVATION



The CSC certification system promotes innovation via the dedicated innovation credit “B3 Innovation”.

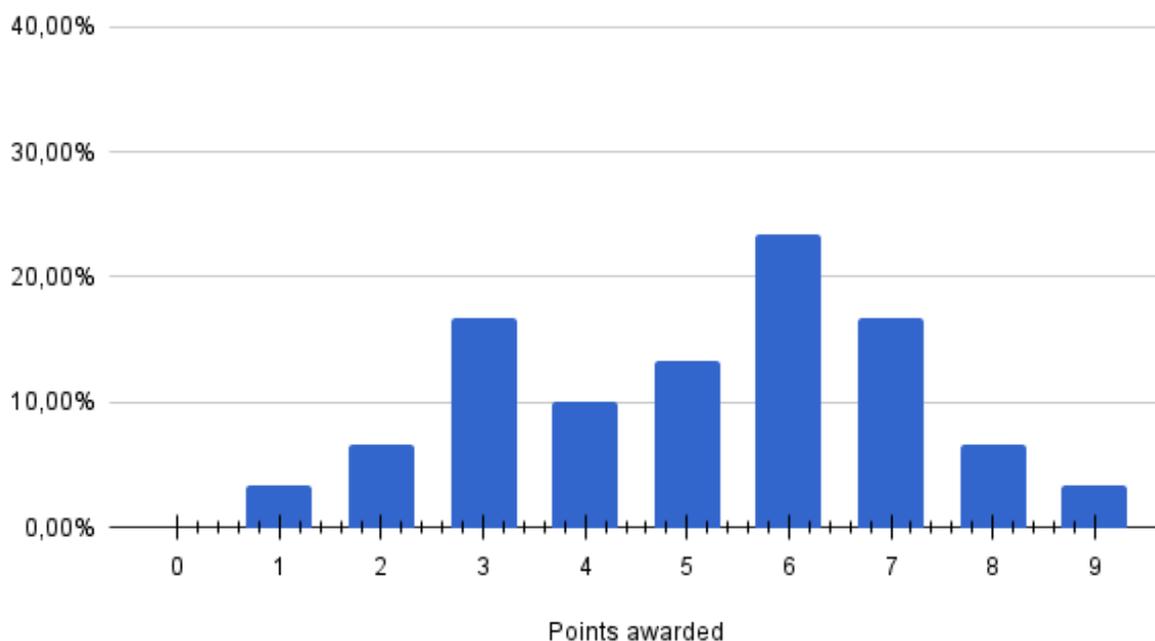
This credit aims at stimulating

- the development and implementation of new solutions that contribute to the sustainability of the operations, its products, its suppliers or other parts of the value chain;
- best practices in the field of sustainability that are not covered by this certification system; and
- exemplary performance under any CSC certification criterion.

In 2021, the CSC’s innovation committee (IC) rewarded 30 innovation applications submitted by projects undergoing CSC certification or according to CSC system version 2.1.

Innovation points were granted to all applications submitted, with results ranging between 1 and 9 points out of a maximum of 9 achievable points.

Distribution of points awarded for 2021



# 7 CONTINUOUS IMPROVEMENT

Continuous improvement of the CSC certification system, including its toolbox, is an important lever to improve the sustainability performance of CSC certified plants.

Valuable feedback was received in 2021 via an inquiry amongst internal CSC stakeholders, namely all RSOs and CBs, and an external stakeholder consultation event.

RSOs, CBs, plants undergoing certification and other stakeholders identified the following improvement potentials:

- Guidance on minimum requirements for documented quality- and health and safety management systems, such as is already provided for environmental management systems, will help clarifying system expectations around quality and health and safety management;
- Additional guidance on robust, yet feasible Sustainability Reporting would be helpful;
- Additional guidance on water scarcity assessment (tool) would be appreciated;
- Where possible, social criteria should be made more tangible and measurable;
- The R-module should be enhanced to allow for labeling different levels of recycled aggregate content;
- The CSC certification system should be expanded further to include e.g. precast producers with external concrete supply.

The CSC very much appreciated the feedback obtained which will help the CSC to provide additional guidance to plants undergoing CSC certification and to CBs in the context of validating evidence provided by their clients. The feedback will also help the CSC to reshape criteria in the next CSC certification system version.



# 8 OUR WAY FORWARD

As part of the CSC continuous improvement process, an updated CSC system version was developed and released early in 2021. As a key element, the new CSC system version 2.1 adds new criteria to the energy & climate credit (→ E3) to promote the use of renewable energy and, in cement production, the reduction of CO<sub>2</sub> emissions. The relevance of operational health and safety is also acknowledged in the system prerequisites.

The CSC also expanded the certification scope in aggregate production: In October 2021 the CSC made available a new certification system for Marine aggregates. The scope of certification of this new supplier certificate includes a wharf (where the marine aggregates are unloaded), its dredging zones (supplying excavation sites) and-via a dedicated evidence list- the dredgers (ships) that excavate and ensure the supply of the wharf.

Beginning of 2022, the CSC will enhance the CSC certification system for concrete towards CO<sub>2</sub>-reduced concrete. Therefore, companies who have obtained or are obtaining a CSC-Certificate at the level Silver or higher will be able to optionally obtain the additional CO<sub>2</sub>-Module. This new module will aim to create transparency with regard to the greenhouse gas emissions associated with concrete production and to classify CO<sub>2</sub>-optimized concrete into CO<sub>2</sub> classes.



# 9 GOVERNANCE STRUCTURE

The transparent and effective decision-making process is at the responsibility of the CSC's executive committee. Continuous involvement of a broad range of stakeholders is guaranteed through the dedicated Advisory Committee, which the CSC was able to establish in 2020 under the lead of Prof. Guillaume Habert, the Chair for Sustainable Construction at the ETH Zurich, together with distinguished experts from environmental and social stakeholder groups as well as leading green building councils. The technical and communication committees with defined leadership ensure target orientated work.

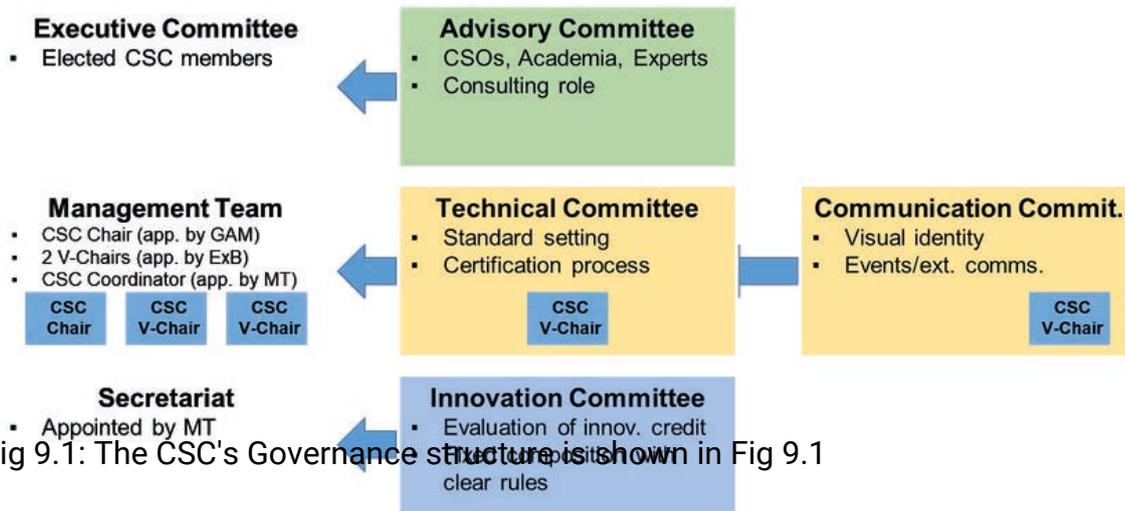


Fig 9.1: The CSC's Governance structure is shown in Fig 9.1

# 10 ABBREVIATIONS

- BREEAM Building Research Establishment Environmental Assessment Methodology
- CB Certification Body
- CSC Concrete Sustainability Council
- CSO Civil Society Organization
- DGNB Deutsche Gesellschaft für Nachhaltiges Bauen – German GBC
- EPD Environmental Product Declaration
- GBC Green Building Council
- GCCA Global Cement and Concrete Association
- LEED Leadership in Energy and Environmental Design
- RSO Regional System Operator
- SDG Sustainable Development Goal



