Concrete Sustainability Council Stakeholder Consultation Meeting

12-14 July 2016, IUCN Headquarters, Switzerland
The views expressed in this publication do not necessarily reflect those of IUCN.

Acknowledgments
This report has been prepared by IUCN based on the input provided by the representatives of the Civil Society Organisations participating in the Concrete Sustainability Council Stakeholder Consultation Meeting (12-14 July 2016).

A special thanks to the Concrete Sustainability Council for inviting IUCN to convene this process.

The process was facilitated by IUCN’s Global Business and Biodiversity Programme (Deviah Aiama, Maria Ana Borges and Giulia Carbone).

About IUCN

IUCN is a membership Union uniquely composed of both government and civil society organisations. It provides public, private and non-governmental organisations with the knowledge and tools that enable human progress, economic development and nature conservation to take place together.

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1. Introduction: About the meeting and the report

The Concrete Sustainability Council Stakeholder Consultation Meeting was convened by IUCN (12-14 July 2016) to enable civil society organisations to discuss and provide input to the Concrete Sustainability Council Scheme (the Technical Manual and Governance and Certification systems). The objective of the meeting was not to reach consensus, but to provide the Concrete Sustainability Council with sufficient input to revise the Scheme.

The meeting brought together 24 participants, ten representing civil society organisations/independent experts (CSOs), six representing the industry, one representing an international organisation, and seven representatives of IUCN and the Concrete Sustainability Initiative, who acted as the organising committee (see Annex 1 for the list of participants).

The meeting focused on a subset of sustainability credits (from the existing CSC credit list), namely:

- E2 Land Use
- E3 Energy Use
- E4 Air Quality
- E5 Water Use
- E6 Bdiversity
- E7 Secondary Materials
- E8 Transport
- S2 Local Community + P1 Local Economy

The environmental credits were examined in their broader context, including through some social and management system-related criteria. Some participants also expressed the desire to provide feedback on other credits, such as Health & Safety and Management; however, time constraints did not allow for these to be covered in a comprehensive manner during the meeting.
The input provided by the CSOs is summarised in this report (which is also available publicly through IUCN’s web site). The Concrete Sustainability Council is committed to review the Scheme based on this input and release a Version 1 of the Scheme in December 2016. Once Version 1 is released, IUCN will work with the CSOs to prepare a public response.

IUCN was the convener and facilitator of the process. As part of this role, IUCN identified and invited CSOs, selecting first from IUCN Members and going beyond when specific expertise was not easily identified. Overall, the aim was to ensure expertise for all the environmental credits reviewed during the meeting.

This report provides an overview of the CSOs’ input and recommendations to the Concrete Sustainability Council. Chapter 2 captures the comments provided on the environmental credits that were reviewed during the meeting for concrete, cement, and aggregates. Chapter 3 captures CSO recommendations on structural elements of the Concrete Sustainability Council Scheme. Finally, Chapter 4 provides overall conclusions and outlines the way forward.

This report is not a comprehensive account of all conversations that took place during the three days of the meeting, nor a unified CSO position on the Scheme. Note that industry input is only included when relevant for context, as the aim of the report is to capture CSO recommendations.

The following is a summary of the CSO recommendations that are discussed in further detail in subsequent chapters of this report:

Scope

Recommendation (1) to the Concrete Sustainability Council: The scope of the Scheme must be expanded to include the quarrying and production of all of the key raw materials used for concrete, in particular cement and aggregates. The Scheme should include the sustainability impacts across the whole value chain, throughout the production chain of raw materials, and during the manufacturing and construction phases, related to issues such as
biodiversity, water, climate, air quality, substitute and fuels coming from waste and waste residues, human rights, etc. In the future, the Scheme should be looking to ensure that the entire life cycle, including post-construction use and end-of-life re-use, reclamation, recycling, etc., is included in the guideline.

**Recommendation (2) to the Concrete Sustainability Council:** If a scorecard approach in which the concrete players will have to select sustainable raw materials providers is preferred (as currently proposed by the Concrete Sustainability Council), the scorecards need to be much more elaborate and exhaustive, and independent verification of each stage is essential. The CSO participants, however, indicated that the most effective approach would be to certify each stage of the value chain. This would help to more effectively reflect the performance level of each stage.

**Recommendation (3) to the Concrete Sustainability Council:** Revise the relevant credits to integrate the CSO input provided in Chapter 2.

**Process**

**Recommendation (4) to the Concrete Sustainability Council:** Provide other CSOs with the opportunity to offer input into the Scheme prior to releasing Version 1, by using the networks of the organisations present in this meeting. More generally, actively engage with CSOs at earlier stages of document/tool/standard development and seek their input at regular intervals during the various processes.

**Governance**

**Recommendation (5) to the Concrete Sustainability Council:** Provide for adequate participation of environmental and social CSOs in the governance of the Scheme. Though equal representation from industry and CSOs is considered best practice, this may not be possible at first. However, it is necessary to tackle this as soon as possible and essential to ensure transparency in the Scheme’s governance. It is also important to consider constituting a permanent, independent, and representative stakeholder panel to ensure best practices are implemented and subject to continuous improvement and evolution. Explore an FSC-type governance structure with, for example, three chambers reflecting the
triple bottom line of sustainability - Economic, Social, and Economic or ECSOs, SCSOs, Business interests.

**Pre-requisites for certification**

**Recommendation (6) to the Concrete Sustainability Council:** At least in the first years of the Scheme, a ‘pre-certification’ stage needs to be considered where companies/products can be in the certification pipeline without having a certificate. In order to do this, a baseline for the Scheme needs to be established, including the set of pre-requisites necessary for reaching the baseline.

**Recommendation (7) to the Concrete Sustainability Council:** Include the criteria presented under 2.4 as pre-requisites.

**Multiple levels of certification**

**Recommendation (8) to the Concrete Sustainability Council:** Review rationale for the different levels and ensure their distinction is clear to stakeholders and users. Consider a reduction in the number of levels and ensure that those retained incentivise continuous improvement by companies through, for example, making the progression in level compulsory after a defined period of time.

**Independent verification**

**Recommendation (9) to the Concrete Sustainability Council:** For the Concrete Sustainability Council Scheme to be credible and trusted, confidence in the certification and verification is critical. The role of the auditor is crucial, and the Concrete Sustainability Council needs to ensure that auditors are truly independent.

**Environmental issues not included in the credits discussion**

**Alternative fuels**

**Recommendation (10) to the Concrete Sustainability Council:** Eliminate hazardous waste inputs into the fuel stream, and consider developing a hierarchy of non-hazardous materials for alternative use (from best to worst), as a map to lead the industry to less pollution and less contribution to GHG emissions.
**Recommendation (11) to the Concrete Sustainability Council:** Remove credits related to the use of AF. If AF is used, integrate into the Scheme additional criteria on air pollution and quality monitoring and reporting, as well as local community involvement in the process.

**Renewable energy usage**

**Recommendation (12) to the Concrete Sustainability Council:** The Scheme should encourage and credit the usage of clean and safe renewable energy, rather than any form of energy that is qualified as ‘renewable,’ given that these definitions vary by place. The Scheme could apply the following hierarchy as a guide:

http://www.energyjustice.net/files/technologies.pdf

**General recommendations**

**Recommendation (13) to the Concrete Sustainability Council:** The current formulation of the criteria is very management-focused. Outcome-based criteria should feature and have heavier weighting in the Scheme.

**Recommendation (14) to the Concrete Sustainability Council:** Remove instances where points are awarded more than once for fulfilling similar criteria under the same or different credits, i.e. address double counting throughout the standard.

**Recommendation (15) to the Concrete Sustainability Council:** The Scheme needs to adopt a single and clear definition of stakeholder.

**Recommendation (16) to the Concrete Sustainability Council:** Make reference to existing good work, reports, tools, and other relevant documents in the technical manual.
2. Scope of the Scheme and Selected Environmental and Social Credits

2.1 Scope of the Scheme

Summary of points raised by CSOs: There was strong consensus among the CSO participants that cement sustainability is not sufficiently addressed and focused on in the CSC Standard.

The CSOs raised concerns on the certification scope proposed by the Cement Sustainability Council, in which the certification focus is on the concrete plant, while cement and aggregate performance are only integrated through a few procurement questions. They indicated that this scope would pose significant risk for the credibility of the Scheme. In particular, they stressed that, as the majority of the significant environmental and social impacts are linked to the extraction of the raw materials (limestone, sand, and gravel) and their transformation (limestone to clinker), the critical sustainability issues linked to cement and aggregates present along the entire value chain need to be reflected in the Scheme and must not be downplayed.

Ideally, each stage of the concrete value chain should be certified according to performance criteria (and not just process criteria) specific to that stage of the value chain (see also Recommendation 13). They noted that this would build on all the good work that has been done in the past 20 years on the cement and aggregate side by companies.

They also considered that it has become increasingly difficult to get permits for quarrying and for cement/concrete plants, and therefore a more comprehensive scope could address resource utilisation across the entire value chain, helping to demonstrate a responsible approach and improving companies’ social license to operate (making getting permits for responsible operations easier compared to others). Thus, if one of the goals of the Cement Sustainability Council is to improve public opinion of concrete as a sustainable building material, there is a risk of being accused of greenwashing if the entire chain is not considered.
There are two possible approaches for inclusion of cement and aggregate sustainability: 1) certification approach: the concrete producer requires the relevant producers to get certified; 2) supply chain due diligence approach: the concrete producer conducts a due diligence process on its cement and aggregate suppliers, asking for information on environmental and social issues through a ‘scorecard’.

**Recommendation (1) to the Concrete Sustainability Council:** The scope of the Scheme must be expanded to include the quarrying and production of all the key raw materials used for concrete, in particular cement and aggregates. The Scheme should include the sustainability impacts across the whole value chain, throughout the production chain of raw materials, and during the manufacturing and construction phases, related to issues such as biodiversity, water, climate, air quality, substitute and fuels coming from waste and waste residues, human rights, etc. In the future, the Scheme should be looking to ensure that the entire life cycle, including post-construction use and end-of-life re-use, reclamation, recycling, etc., is included in the guideline.

**Recommendation (2) to the Concrete Sustainability Council:** If a scorecard approach in which the concrete players will have to select sustainable raw materials providers is preferred (as currently proposed by the Concrete Sustainability Council), the scorecards need to be much more elaborate and exhaustive, and independent verification of each stage is essential. The CSO participants, however, indicated that the most effective approach would be to certify each stage of the value chain. This would help to more effectively reflect the performance level of each stage.

**Recommendation (3) to the Concrete Sustainability Council:** Revise the relevant credits to integrate the CSO input provided in Chapter 2.
2.2 Concrete-level input on the credits

UNDERSTANDING:

BIODIVERSITY (E6)

1. In certain countries, concrete plans are not necessarily in urban areas. Also, there is biodiversity in urban areas. The interventions might be small but the cumulative impact (negative or positive) could be large. Collaborative approach.

2. It’s an opportunity to EDUCATE people. (maximize potential for biodiv. conservation).

3. The weighing between RISKS on biodiv. between upstream and concrete should be taken into account. Risks-based approach.

4. Work with local groups to get ideas of what actions to take.
5. Areas to avoid: new plants vs. existing site?

6. Assess the site:
   - Management plan built on risks & opportunities
   - Question: is your plant in an EBA?
   - PA, HCV?

7. Enhance the biodiversity values of the site. Help create corridors between urban & rural areas.

8. When more to a site (this is especially to batch plant), establish a biodiversity baseline.

9. Biodiversity elements = species and ecosystems.

10. Consider & in the basin.
    - Impact assessment involve local communities/experts (due to specific knowledge)

11. Link to water use CREDIT + and impacts on fresh water systems especially in water source areas.
UNDERSTANDING:

ENERGY & CLIMATE (E3)

1) In certain countries (China), companies are NOT allowed to publicly report on CO2 emissions.
2) C3 needs define more clearly "independent" verification. Include in "glossary" that external verification fulfills certain criteria.
   This is why it would be good to have NGOs on board to verify the data.
   NGOs should be involved in the process for the "improvement" plans.
   Externally verified = get input from civil society on which party will verify.
3) Combine C2 + C3 (report + verified) (think about group verification to abate the costs).
SUGGESTIONS:

C4 before C2
C3 after C4

4. Combine C4 and C6 (defining plans and 1 point) - and plan should be reassessed regularly.
5. Give more points to achieving energy savings (2) and renewable energy targets (C7)

6. Independent verification C4 and C6

7. Renewable should be clean renewable (solar, wind, ...) for concrete plants.

8. Unbalanced weight

9. If renewable energy ensure sustainable siting (right choice at right place) (for own production)

10. Energy performance of plant over year (absolute)? Which unit? Needs to be clarified!
11. How can this be ensured that targets are set in an accepted way? For example follow/link to government level targets in terms of emission reduction?

12. Cross check with TRANSPORT: be consistent and transparent.
If threshold is low, then also avoid double counting.

13. Energy downstream also to be considered. (Note challenge is the industry structure).
UNDERSTANDING:

WATER USE (E5)

- Issue of double counting
  - Water, EMS, local community
- Incorporate water at site into reuse
- Why is other quality aspects beside pH not controlled? Adding particulate (siltation solids) - micro pollutants
- Treated waste water inc. in process? Us example
- Aim → optimal use of water
- Performance vs management
- Scoring linked to scarcity
- Risk based approach
- Regional specifications
- Impacts on local water use
- No quantitative targets
  - Global vs regional differentiation
  - Benchmarking vs targets for reduction
- Rewarding actions?
- Hierarchy to reduce water

Setting
Target @
Global + national
- Requirement to consult on projects
Opportunity to seize point for measurement
Receiving
- Stabilized benefits
on water quality discharge (C4)

Reduce is weak
Eliminate use of
Potable water in
Water scarce areas

Resources:
- Water assessment
- C1 & C2 guidelines on water
- Accounting
- Water accounting
- Mandatory credits for 31 (for A level)

- Maximizing scoring for improved water quality?
UNDERSTANDING:
AIR QUALITY (E4)

- Estimate of fugitive emissions?
- Should define process & fugitive dust
- Fugitive dust is a problem for both cement & concrete plants -> more important to manage b/c it's a public nuisance
- Who can complain? Employees or community
- Suggest to install PM monitors on each side (consider local community involvement of local employees living)
- Clarify if add'l info section is relevant here.
- Consider reporting measurements publicly by the company: on-site or on a website
- Is number of complaints a good measurement unit?
- Have a system to manage complaints.
- Dust from transportation? -> fugitive dust
- Who judges if a complaint is justifiable?
- Engage community thru participatory process for shared ownership: can avoid complaints in first place
- Clarify plant vs. transport air quality: make link/record to transport section
UNDERSTANDING:
LOCAL COMMUNITY (L2) & LOCAL ECONOMY (P1)

- Quality what is learnt by stakeholders involvement
  - FPIC
  - INvolvement in process from beginning
  - Determine quality of engagement
    (How often? For what issues?)

- Informal economy - inclusiveness? Labour?
  - Addressed? Look if an issue
  - P1 + S2?

- Complaints mechanism for local community
  - Procedure inc. addressing

- Clarity around why emphasis on noise pollution?
  - Dust
  - Light

- Management plan vs implementation

C6.1 How to report on this? What are we measuring?

- Scoring for social investment is low

C6.1 - Linked to P1 local economy
  - Very weak

- Evidence is weak
- Risk + opportunity approach
UNDERSTANDING:
SECONDARY MATERIALS (C7)

- FUEL IN AIM? FOR CEMENT PROD
   SO DELETE FROM CONCRETE SECTION

ALTERNATIVES ASSESSMENT? FOR CEMENT
- THIS IS DONE (BUT THERE ARE COMPETITIVE
  ISSUES TO BE CONSIDERED)
- FOR CONCRETE THIS IS NOT COMMONLY DONE
  AT LEAST
- SO THERE IS OPPORTUNITY FOR CSC TO PROMOTE

- PARTS OF THE ASSESSMENT SHOULD BE MADE PUBLIC
  (E.G. SECONDARY AGGREGATES)
- ASSESSMENTS SHOULD INCLUDE TOXICITY
  ANALYSIS FOR CERTAIN MATERIALS (E.G. SLA.G)

INCREASE THE USE OF DEMOLITION CONCRETE.
- CONSIDER PLACING C8 AFTER C15 (CLOSING RELATED)

FUTURE INNOVATIONS?
- NEED TO CHECK TIME TO ACHIEVE
- HOW TO PROMOTE USING CONCRETE THAT THIS
  INCREASES RE-USE & RECYCLING?
- CONCRETE PLANT SHOULD ENSURE THAT RETURNED
  CONCRETE IS APPROPRIATELY USED.
- WHY SHOULD RETURNED CONCRETE GO BACK TO THE
  SAME PLANT?
- CONSIDERATION OF 'ZERO-WASTE' (CLOSED CIRC.
  SECONDARY MATERIALS NOT BEING REUSED).
- SHOULD POINTS BE GIVEN FOR REPORTING?
- IF THEY DO, THEN THIS SHOULD BE CONSISTENT ACROSS
  ALL ISSUES
- CONSIDERATION OF CHINA'S INDIA REQUIRE
  CONSENT SPECIFICALLY IS
  SEE PARTICULARLY IMPORTANT
  HERE IN LIGHT OF CHINA'S
  AMBITION OF THE SCHEME
UNDERSTANDING E7 COND

- Toxicity Assessment of Slag
- Legacy issue of chemicals in the product & minimising the exposure to toxic material.
- Promote proactively reducing risk of more toxicity from more secondary material use.
- Check how this is done today & if this is best addressed here or elsewhere in scheme.
- Add reference to well established specific product standards for jurisdictions that don't have good toxicity regulations or are not enforced.
- Consider proactively supporting the local construction industry towards recycling waste/circular economy.
- General comment on regional specificity: ensure that flexibility does not degrade the quality of scheme or product.
2.3 Cement- and aggregates-level input on the credits

The participants spent a large part of the meeting discussing additional elements that could be included in the Scheme in relation to cement and aggregates, which are considered critical parts of the value chain of concrete. This was done in a sequential manner, considering one credit after another and the different stages as they apply to each credit. While an attempt was made to provide input into all stages and credits, the feedback is not meant to be exhaustive and will require additional input from CSOs. However, it provides an indication of the elements that should be taken into consideration when expanding the scope of the Concrete Sustainability Council Scheme to include the performance of the cement and aggregate sectors.

This section is structured as follows:

- General comments/recommendations
- Cement, including extraction and production stages
- Aggregates, including extraction and washing stages
- References for further information

GENERAL COMMENTS/RECOMMENDATIONS

- Identify and work with relevant experts.
- Promote stakeholder participation/engagement in forums with other local operators and with local communities.
- Ensure transparency.
- Establish a complaints/grievance/feedback mechanism, and associated plan for redress, for local communities. Consider how to reward companies based on how effectively and efficiently they address complaints and resolve the issues. The complaints mechanism is a way of interacting with the local community. Consider combining with local regulatory compliance.
- Structure of the water credit: This credit should cover water use, water quality, and impacts to hydrology (water table, flood risk, and water ecosystems, including wetlands at the watershed level):
  - The structure of the CSC Scheme could be mimicked for concrete and for cement and aggregates: i.e. a) measurement, b-i) actions for reduction, b-ii) quality of discharge, b-iii) with the addition of new issues not related to water use directly, and c) reporting.
A reference to standardisation for water monitoring (recently released by CSI water accounting guidelines) could be added subsequently.

A risk-based approach for water management could be adopted, including options for factoring in water scarcity of the area around the plant/site (to normalise water availability and use issues/credits) and sensitivity of surrounding water bodies (to normalise water quality issues/credits).

CEMENT

Quarrying/Extraction of Limestone

Water:
• Water use measurement and reduction actions should include dust suppression practices.
• Quarrying can consume a lot of groundwater, significantly impacting the geology of the surrounding area. To address this challenge:
  o avoid impacts on the water table, including, de-watering of important habitats;
  o take a landscape-scale approach;
  o ensure proper channelling or capture of surface runoff; and
  o reward the reuse or recycling of water, which is a best practice.
• Consider the impacts on downstream stakeholders in terms of both quantity and quality of water, including:
  o consideration of rainwater harvesting;
  o consideration of enhancing water quality through natural filtration systems; and
  o water provisioning for nearby communities as a positive impact.

Land stewardship:
• Understand who the stakeholders and rights-holders are in the land concerned.
• Provide safe access to unquarried land to users of that land, where legally possible.
• It is important to consider whose land it is.
• How is the land being used and is land use changing?
• How was the land acquired?
• After the company’s operations, how will the land be returned to local communities?
• Restoration plans should include consideration of how the land will restore biodiversity (in the design stage).
• Consider how to address indirect impacts/broader landscape-level impacts, including on groundwater systems.
• Consider impacts from the quarry (expansion in larger areas) on landscape connectivity and wildlife corridors.
• Determine whether ripping vs. blasting is preferred by communities around the quarries.
• Monitor the pH and toxicity of the cement kiln dust (CKD) that is deposited to the quarry.
• Make considerations/distinctions for measures recommended before operations have commenced, during operations, and after operations.
• Address land-use conflicts (e.g. use for agricultural purposes vs. quarrying) and competition considerations by engaging local stakeholders and rights-holders and involving them as much as possible in decision making around how the land is used, including FPIC considerations, especially where the land has multiple uses.
• Integrate with landscape-scale plans that bring stakeholders and rights-holders together.
• Pay attention to indigenous peoples’ land-use rights, which can be particularly hard to identify, for example sacred sites, customary rights and uses.
• Companies should maintain responsibility for a site until it is properly restored, because sometimes sites can be used for waste disposal by other communities (posing hazardous risks to local communities, including water stagnation).

Biodiversity:
• Subject to robust [to be defined] environmental and social impact assessment and management system, at least conforming but not limited to national and international law and regulations (promote best practices).
• No species extinctions and rare ecosystems loss are caused.
• Address limestone-restricted biodiversity in accordance with established guidance.
• Aim towards net positive impact on biodiversity for new sites.
• For existing sites: Ideally, if baseline data exists, make a decision to put back what was there before OR make a decision to restore a rarer habitat of greater conservation priority. In the absence of baseline data, identify reference locations in the landscape.
• Emphasise avoidance, minimisation, and restoration steps of the mitigation hierarchy.
• Highlight importance of avoidance and ‘no-go’ areas.
• Emphasise better assessment of alternative sites for new developments.
• There are significant opportunities for ecological restoration in quarries - not just for making up for impact caused but for having additional positive impact.
• Consider taking a risk- and opportunity-based approach based on biodiversity values/elements present and impact caused, with preferential treatment given to nature even in an urban context.
• Have a robust restoration plan.
• Following use of the land by the company, the restoration plan should be designed in consultation with indigenous peoples where present.
• Practice continuous monitoring of biodiversity during operations.
• Plant and promote local native species and avoid and control invasive species (applies to all stages).
Consider the timing of when extraction happens, in terms of biodiversity and local community disturbance.

Assess the impacts on biodiversity, water, and communities from sand quarrying in rivers (applies to multiple stages).

**Local communities/Local economies**

- Informal/small-scale quarrying is an issue in this sector.
- Local communities may not have the expertise to forecast future impacts from certain situations. Have a knowledgeable mediator who can work on bringing together the company and the community. The mediator can be a third-party organisation or someone who is considered appropriate by all parties.
- In the CSC Scheme, a recommendation is to have a more rigorous social investment plan (C6.1 in S2). One point is not sufficient; this needs more weighting, which would drive/incentivise the company to be more rigorous with this plan. Include issues related to livelihoods, land use, traditional land use, land devaluation, and displacement.
- Address local community needs and possible economic, cultural, recreational, educational, and health opportunities in rehabilitation plans and ongoing management.
- Promote combined benefits for biodiversity and traditional communities.
- Different models for community engagement may come up.
- Refer back to Chapter 2.1, and ensure that the recommendations made for concrete are also included in other stages.
- Establish a regular line of communication with the community – e.g. a community liaison chosen by the community.
- Have a robust stakeholder engagement plan.
- Have a regular stakeholder group that is involved with management of the site.

**Indigenous Peoples (specific)**

- Free, Prior and Informed Consent (FPIC) and mining: Recognise IP rights and way of life.
- Recognising IP rights through UNDRIP and FPIC is considered international best practice.
- Existing operations? It is complex. Conflicts can emerge between different IP communities on the company's use of the land. IP Development Plan should be part of the approach.
- The engagement process should be defined by the system that is in place with the IP communities, and not by the government or the company.

**Cement production**

**Air quality:**

- Rewards based on how much emissions such as dioxins, PM, lead go down. The point is not just meeting government regulations, but striving to continuously minimise
emissions and associated toxicity. Emission limit values are not based on safety but rather other considerations. There are no safe levels for dioxins and certain heavy metals.

- Require Selective Catalytic Reduction (SCR), at least in heavily polluted areas. Aspire to have SCR on all cement plants eventually, but start out in the areas that need it the most.
- Determine how to ensure that eventually every cement plant has a fundamental set of pollution control devices and strategies that are agreeable as basic operating equipment to have: scrubbers, baghouses, etc.
- Reward cement kilns that have very limited CKD currently, and incentivise those that need to reduce CKD.
- Require continuous and/or regular monitoring and public reporting.
- PM Sensors could be used inside and outside cement plants, and potentially at quarries, and even in the community if feasible, as part of stakeholder engagement. Based on existing research on city air pollution in China, 25% or more of PM2.5 is from secondary aerosols (SA) – so monitoring and reporting should consider including source of SA.
- Emphasis should be on minimising pollution overall and not just monitoring and reporting. (In some countries, the first step is monitoring and reporting, but don’t rely just on doing this.)
- Emissions limit values: Because they vary across countries and sometimes significantly, there needs to be consideration to set up baselines based on best available technologies (e.g. Nigerian limit values can be a magnitude higher (less stringent) than other jurisdictions, and a bar should be set). See what the best available standards for emissions limit values are, and then consider how to drive all companies towards these best standards, no matter what national limits are.
- Through the use of alternative fuels, there is an introduction of a wide range of chemicals into the atmosphere. Recognise that not all of these chemicals have abatement technologies, so a more proactive approach is to identify alternative fuels that are known to have lower risks of air pollution. By reducing the amount of complex alternative fuels in use, there is a reduction in air pollution.
- If there are air scrubbers in use to abate air emissions, recognise that ‘zero-discharge’ may not actually be the case, as there could be water discharge. An exception to zero-discharge to water may be granted for instances where air scrubbers are called for.
- The goal should always be to keep pollution (air, water, land) out of the public realm.
- Extracted from CSC Scheme, CSOs recognised as good language for this stage of cement production: The emissions to be reduced are emissions of toxic air pollutants, such as mercury, acid gases, and total hydrocarbons, along with emissions of particulate matter (also known as particle pollution) and in particular respirable silica.
Energy and climate

- It is important to acknowledge that there is a trade-off between energy and GHG reduction costs and toxicity (alternative fuels).
- Action/proposal: Consider developing a hierarchy of fuel use for alternative use, as a map to lead the industry to less pollution and lower contributions to GHG emissions.
- Note that, for some CSOs, burning wastes in general is problematic – not just for the cement sector, but in general this is not an ideal use of waste. Alternative fuels should be non-fossil-fuel-based, e.g. for certain types of biomass. Strong CSO concern: This industry needs to consider the growing controversy of burning hazardous waste in cement kilns and its potential toxicity impacts on local communities (not only in countries in Europe and North America, but also in countries in Latin America and Asia). This is a challenging issue and will be a source of continuing controversy for this sector. CSOs would be willing to work together to identify the least harmful way possible for the use of alternative/hazardous fuels in this sector. Waste incineration can be an ‘easy out’ from promoting recycling and ‘closing the waste loop’. This is an important issue, as waste is a growing resource in some countries.
- More communities are stepping up against cement kilns, as they use alternative fuels. The question is how much gain is derived from the use of alternative fuels? For 2050 roadmaps, it’s seen as a 20-25% GHG reduction. The assumption is also that the wastes being burned would have been landfilled, which may not necessarily be the case. Biomass-based fuels are considered carbon neutral, which some view as contentious, but this is considered to be so by the IPCC. The waste management systems in some countries are turning towards incineration, which has trade-offs.
- On climate change and air pollution, cement production is the main contributor compared to concrete production.
- Concrete production: There are a lot of ways to reduce the cement, which means reducing GHG emissions. This has been LEED’s way of determining more sustainable concrete.
- Acknowledge the fact that innovations will be required in order to meet 2050 GHG emissions targets. Cement plants that will be built today will be operational past 2050. A credible certification system has to incentivise meaningful change.

PERFORMANCE CONSIDERATIONS:

- Energy efficiency of kilns: Consider giving more points based on energy efficiency performance; e.g. switching from wet to dry kilns is a big leap in efficiency gains.
- Consider if/how a plant can be given bonus points for carbon capture and storage approaches.
- In consideration of the Paris Agreement, and its 1.5/2 degrees limit, there is a need for very clear GHG reduction targets and accompanying action plans to achieve these targets by certain timelines. There are already clear non-fossil-fuel-based energy targets in China by 2030.
• Use internationally (IPCC) and nationally recognised methodologies for monitoring, reporting, and verification of GHG emissions.
• Consider that performance levels could be aligned with the Low Carbon Technology Partnership for the Cement Sector and use the CSI CO₂ and Energy protocol in line with the GHG Protocol.
• Reward the use of cleaner alternative fuels using a clear reference list and hierarchy.
• Reward clinker substitution that could help reduce GHG emissions, in the context of an analysis on availability and optimisation of their use.
• Reward innovations that will certainly be required in order to meet 2050 GHG emissions targets.
• Reward the use of clean and safe renewable energy.
• Reward investments in R&D for developing low-CO₂ cement: Is it fair to reward the big players around innovation in general?
• Don’t decouple cement and the power of influence that the vertically integrated companies have.
• Give points for consistent fossil and absolute energy use reductions, compared to past performance of the same plant.
• Give points for GHG emissions reductions: CO₂ emissions/kilogram; consider more points for reduction targets a company takes that are in line with the Paris Agreement.
• Consider also the use of a science-based targets approach (the CDP-WRI-WWF initiative) for example, which takes a sector-based approach.
• Reward climate change adaptation assessments for the plant? Recommendation to consider this in waste management but NOT in climate change aspect, given the sector’s contribution to GHG emissions.
• Any consideration of rewards for offsetting of GHG emissions as a last resort (when/where there are limits reached through technological innovations) in line with the mitigation hierarchy for GHG emissions? Consider that this may conflict with the science-based target approach. General impression is this is controversial, and organisations are not in favour of including offsetting.
• Consider the use of non-forest/land-use related offsets, for example CDM projects, investments in renewable energy projects elsewhere in the region (i.e. after limits have been reached in own value chain) that are quantifiable, permanent and don’t take away incentives for reductions.
• Consider how a company could invest in technologies in the broader value chain to take credit in specific plants to reduce GHG emissions collaboratively.

Water
• Wet vs. dry kilns: Express preference for dry kilns by assigning fewer points to a wet kiln for example – is this prescriptive vs. performance? (The intended outcome is to reduce the amount of water used per unit of production. The certification system should help
the company on a pathway for more sustainable water resource use. However, there is an issue of scale, depending on the type of technology installed: phasing out a wet kiln is a very different undertaking than installing individual meters for key processes at the plant.

- Important water quality issues at this stage, comparatively from looking at concrete alone, to check will be: temperature from cooling processes, pH, and total suspended solids (TSS).

**Land Stewardship**
- Understand who the stakeholders and rights-holders are on the land concerned.
- Provide safe access to unquarried land to users of that land, where legally possible.
- It is important to consider whose land it is.
- How is the land being used and is land use changing?
- How was the land acquired?
- After the company’s operations, how will the land be returned to local communities?
- Restoration plans should include consideration of how the land will bring back biodiversity (in the design stage).
- Consider how to address indirect impacts/broader landscape-level impacts, including on groundwater systems.
- Consider impacts from the quarry (expansion in larger areas) on landscape connectivity and wildlife corridors.
- Determine whether ripping vs. blasting is preferred by communities around the quarries.
- Monitor the pH and toxicity of the cement kiln dust (CKD) that is deposited to the quarry.
- Make considerations/distinctions for measures recommended before operations have commenced, during operations, and after operations.
- Address land-use conflicts (e.g. use for agricultural purposes vs. quarrying) and competition considerations by engaging local stakeholders and rights-holders and involving them as much as possible in decision making around how the land is used, including FPIC considerations, especially where the land has multiple uses.
- Integrate with landscape-scale plans that bring stakeholders and rights-holders together.
- Pay attention to indigenous peoples’ land-use rights which can be particularly hard to identify, for example sacred sites, customary rights and uses.

**Biodiversity**
- Subject to robust [to be defined] environmental and social impact assessment and management system, at least conforming but not limited to national and international law and regulations (promote best practices).
- Better assessment of alternative sites should be emphasised for new developments.
• Highlight importance of avoidance and ‘no-go’ areas.

**Local communities / Local economies**

• Establish a regular line of communication with the community – e.g. a community liaison chosen by the community.
• Have a robust stakeholder engagement plan.
• Have a regular stakeholder group that is involved with management of the site.

**AGGREGATES**

**Aggregate Quarrying/Extraction**

**Water**

• Water use measurement and reduction actions should include dust suppression practices.
• Consideration of flood risks given location in the river systems, as this might have greater impacts than water use and water quality.
• Quarrying of aggregates can consume a lot of groundwater, significantly impacting the geology of the surrounding area. To address this concern:
  o avoid impacts on the water table, including de-watering of important habitats; and
  o take a landscape-scale approach.

**Land stewardship**

• Understand who the stakeholders and rights-holders are in the land concerned.
• Provide safe access to unquarried land to users of that land, where legally possible.
• It is important to consider whose land it is.
• How is the land being used and is land use changing?
• How was the land acquired?
• After the company’s operations, how will the land be returned to local communities?
• Restoration plans should include consideration of how the land will bring back biodiversity (in the design stage).
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- Make considerations/distinctions for measures recommended before operations have commenced, during operations, and after operations.
- Address land-use conflicts (e.g. use for agricultural purposes vs. quarrying) and competition considerations by engaging local stakeholders and rights-holders and involving them as much as possible in decision making around how the land is used, including FPIC considerations, especially where the land has multiple uses.
- Integrate with landscape-scale plans that bring stakeholders and rights-holders together.
- Pay attention to indigenous peoples’ land-use rights, which can be particularly hard to identify – for example sacred sites, customary rights and uses.

**Biodiversity**

- Subject to robust [to be defined] environmental and social impact assessment and management system at least conforming but not limited to national and international law and regulations (promote best practices).
- No species extinctions and rare ecosystems loss are caused.
- Aim towards net positive impact on biodiversity for new sites.
- For existing sites: Ideally, if baseline data exists, make a decision to put back what was there before, if what was there before was of conservation value, if not (e.g. intensive agriculture) restore to a priority habitat of greater conservation value. In the absence of baseline data, identify reference locations in the landscape against which to benchmark restoration or source restoration material (hay strewn or seeding).
- Emphasise avoidance, minimisation, and restoration steps of the mitigation hierarchy in planning and implementation.
- Highlight importance of avoidance and ‘no-go’ areas.
- Emphasise better assessment of alternative sites for new developments.
- There are significant opportunities for ecological restoration in quarries - not just for making up for impact caused but also for having additional positive impact.
- Consider taking a risk- and opportunity-based approach based on biodiversity values/elements present and impact caused, with prioritisation of biodiversity-focused restoration, even in an urban context.
- Have a robust restoration plan, noting that all restoration plans can include some provisions for biodiversity (habitat creation/nest boxes/butterfly banks, etc.).
- Following use of the land by the company, the restoration plan should be designed in consultation with indigenous peoples where present.
- Practice continuous monitoring of biodiversity during operations.

**Aggregate Washing**

**Water**
• Reward the reuse or recycling of water, which is a best practice, starting from application of standards for measurement (e.g. the recently released CSI water accounting guidelines).

**Land stewardship**

• Understand who the stakeholders and rights-holders are in the land concerned.
• Provide safe access to unquarried land to users of that land, where legally possible.
• It is important to consider whose land it is.
• How is the land being used and is land use changing?
• How was the land acquired?
• After the company’s operations, how will the land be returned to local communities?
• Restoration plans should include consideration of how the land will bring back biodiversity (in the design stage).
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• Pay attention to indigenous peoples’ land-use rights which can be particularly hard to identify – for example sacred sites, customary rights and uses.

**Biodiversity**

• Subject to robust [to be defined] environmental and social impact assessment and management system at least conforming but not limited to national and international law and regulations (promote best practices).
• Better assessment of alternative sites should be emphasised for new developments.

**REFERENCES**

• CSI guidelines on mercury emissions (in partnership with UNEP)
• CSI guidelines on use of alternative fuels
• IPCC methodology
• Low Carbon Technology Partnership for the Cement Sector
• CSI CO₂ and Energy protocol in line with the GHG Protocol
• Robust ESIA by a competent/qualified expert
• ESIA guidelines from CSI
• Quarry rehabilitation guidelines from CSI and case studies
• www.afterminerals.com
• Integrated Biodiversity Assessment Tool (IBAT)
• Biodiversity Management Plan guidelines from CSI
• Water risk filter
• Extraction and biodiversity in limestone areas
• IFC and World Bank guidance
• ESIA guidelines from CSI
• ICMM 2013 Joint Declaration on Mining and Indigenous Peoples
• IFC Performance Standards
3. Recommendations to the Concrete Sustainability Scheme

During the three-day meeting, the civil society organisations’ representatives made the following recommendations, aimed at strengthening the Concrete Sustainability Council’s Scheme.

3.1 About the process

Summary of points raised by CSOs: The CSOs stressed the importance of involving CSOs proactively and much earlier in such processes. The process and outcomes could have been greatly enhanced if engagement with civil society had started earlier.

Recommendation (4) to the Concrete Sustainability Council: Provide other CSOs with the opportunity to offer input into the Scheme prior to releasing Version 1, by using the networks of the organisations present in this meeting. More generally, actively engage with CSOs at earlier stages of document/tool/standard development and seek their input at regular intervals during the various processes.

3.2 About governance

Summary of points raised by CSOs: The CSO representatives noted that the proposed CSC governance seemed to be exclusively composed of industry players, clearly diverging from other comparable schemes (e.g. FSC), and effectively creating a situation in which an industry-driven and -dominated process is certifying itself. The participants warned that in this situation the credibility and confidence in the effectiveness of the standard could be questioned.

It is important to set up a governance structure that would include CSOs and that would build on the strengths of the different groups involved, to make the standard as robust and practical as possible. Furthermore, it was noted that good governance is not just about including CSOs, but in which/what bodies and making sure the right types of CSOs are involved, including specific social and environmental organisations depending on the issues/credits.
The question of what “balance” is the right balance in CSO participation was discussed. The CSOs noted that the ideal scenario would be an equal balance in any decision-making body. Some also indicated that CSO participation in decision making is so important that it would be better to be part of decision-making bodies, even in a minority position as a first step, rather than in an advisory role.

**Recommendation (5) to the Concrete Sustainability Council:** Provide for adequate participation of environmental and social CSOs in the governance of the Scheme. Though equal representation from industry and CSOs is considered best practice, this may be difficult for industry at first. However, it is necessary to tackle this as soon as possible and essential to ensure transparency in the Scheme’s governance. It is also important to consider constituting a permanent, independent, and representative stakeholder panel to ensure best practices are implemented and subject to continuous improvement and evolution. Explore an FSC-type governance structure with, for example, three chambers reflecting the triple bottom line of sustainability - Economic, Social, and Economic or ECSOs, SCOS, Business interests.

### 3.3 About pre-requisites for certification

**Summary of points raised by CSOs:** The CSOs agreed on the need to define pre-requisites for certification. The understanding is that only companies having these credits in place would be eligible for certification (although reaching this minimum level would not imply any form of certification). The CSO highlighted the following sustainability issues:

- **Legal compliance** is essential and should form part of the pre-requisites. Points should not be awarded for legal compliance anywhere in the standard.
- Though it might be unrealistic to include wet kilns as a no-go issue, this technology needs to be phased out. Key goals need to be established, allowing some grandfathering for wet kilns, but explicitly stating that no new wet kilns will be built and that existing wet kilns must be improved and phased out by end of life or earlier.
- The ultimate aim should be public disclosure of environmental and social information. Therefore, as a starting point, issues such as pollution treatment.
monitoring, and public disclosure could be made mandatory credits\(^1\) within the Scheme.

- Other pre-requisites discussed were:
  - To qualify for certification, extraction and processing operations must not directly or indirectly result in a net loss of biodiversity or cause species extinctions.
  - For new sites/expansions, a commitment to ‘no-go’ in certain categories of IUCN’s Protected Areas (categories to be confirmed)\(^2\) and other sites of biodiversity importance.

**Recommendation (6) to the Concrete Sustainability Council:** At least in the first years of the Scheme, a ‘pre-certification’ stage needs to be considered where companies/products can be in the certification pipeline without having a certificate. In order to do this, a baseline for the Scheme needs to be established, including the set of pre-requisites necessary for reaching the baseline.

**Recommendation (7) to the Concrete Sustainability Council:** Include the criteria presented under 2.4 as pre-requisites.

### 3.4 About multiple levels of certification

**Summary of points raised by CSOs:** Schemes with multiple certification levels can be confusing to external audiences, and having too many levels may jeopardise the credibility of the Scheme if the entry level is set too low (i.e. is little more than legal compliance). Four levels were considered as too many by some of the CSO participants. On the other hand, having more than one level presents an inclusive approach that considers all company sizes and emphasises continuous improvement.

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1 Credits that have to be fulfilled in order for the company to receive a certificate.

2 Note that there is a Motion being discussed at the IUCN Congress about “Protected Areas and other areas important for biodiversity in relation to environmentally damaging industrial-scale activities and infrastructure development” which calls on the business community to respect all categories of IUCN protected areas as no-go areas for environmentally damaging industrial-scale activities and infrastructure development. Final text will be available on September 10\(^{th}\).
If opting for more than one level, it is important to very clearly differentiate each level and create incentives for moving up in levels. It is also important that the name/logo of the entry level makes clear that it is only the first of several levels (e.g. calling it ‘Bronze’ rather than ‘Certified’ – the latter of which could be misconstrued as the highest/only level). Another option is to display all the levels and clearly mark which one is achieved.

**Recommendation (8) to the Concrete Sustainability Council:** Review rationale for the different levels and ensure their distinction is clear to stakeholders and users. Consider a reduction in the number of levels and ensure that those retained incentivise continuous improvement by companies through, for example, making the progression in level compulsory after a defined period of time.

### 3.5 About independent verification

**Summary of points raised by CSOs:** Third-party verification is an important element to support the credibility of a scheme. In order to ensure that there is a ‘firewall’ between the auditor and the companies, payments cannot be made directly by the company to the auditors, and the selection of the auditors has to be vetted by the Scheme. Here again, the type of governance of the Scheme will have huge implications on the credibility of the verification system.

Furthermore, other elements will affect the quality, and hence the credibility, of the auditing process: The audit should also include site visits with stakeholder participation, an accreditation scheme independent from the Concrete Sustainability Council should ensure auditors’ capacity and expertise in the sector, conflicts of interest should be proactively identified, and audit reports should be made public for the companies that get certified.

**Recommendation (9) to the Concrete Sustainability Council:** For the Concrete Sustainability Council Scheme to be credible and trusted, confidence in the certification and verification is critical. The role of the auditor is crucial, and the Concrete Sustainability Council needs to ensure that auditors are truly independent.
3.6 About environmental issues not included in the credit discussion

Alternative Fuels (AF)

Summary of points raised by CSOs: AF (waste and waste residues) is a challenging and complex issue and, going forward, there will be more and more confrontation on this with local communities. Burning waste is among the least preferred options according to the waste hierarchy, which favours prevention, reuse, recycling, and composting. The current practice of the cement industry, however, is to compare the use of AF not to the above waste hierarchy options but to landfilling, which is at the lowest level, and claiming GHG reductions. Additionally, most AFs used in the cement industry are fossil-based, and cannot be considered carbon neutral. There are also important concerns related to air emissions from fuels. Toxicity of AF is not taken into account when selected as an energy and climate reduction.

Generally, CSO participants are not supportive of the use of AF as a fuel for cement production. Therefore, they suggest removing any credit related to the use of AF. If AF is used, they recommend at least higher/added criteria on air pollution monitoring and transparency, and local community involvement should be included as mandatory for certification.

A CSO participant offered to work together on a hierarchy of fuels which can be burned in a kiln as a map to lead the industry to less pollution and more creativity. Another CSO participant highlighted that the burning of any type of waste is not supported by their organisation in general, as this is not an ideal use of waste. Their position is that AF are either hazardous or will contain fossil fuels, and that incinerators are much better regulated. Kilns will have higher pollution because of volume.

Recommendation (10) to the Concrete Sustainability Council: Eliminate hazardous waste inputs into the fuel stream, and consider developing a hierarchy of non-hazardous materials for alternative use (from best to worst), as a map to lead the industry to less pollution and less contribution to GHG emissions.
Recommendation (11) to the Concrete Sustainability Council: Remove credits related to the use of AF. If AF is used, integrate into the Scheme additional criteria on air pollution and quality monitoring and reporting, as well as local community involvement in the process.

Renewable energy usage

Recommendation (12) to the Concrete Sustainability Council: The Scheme should encourage and credit the usage of clean and safe renewable energy, rather than any form of energy that is qualified as ‘renewable,’ given that these definitions vary by place. The Scheme could apply the following hierarchy as a guide:
http://www.energyjustice.net/files/technologies.pdf

3.7 General comments/recommendations

Recommendation (13) to the Concrete Sustainability Council: The current formulation of the criteria is very management-focused. Outcome-based criteria should feature and have heavier weighting in the Scheme.

Recommendation (14) to the Concrete Sustainability Council: Remove instances where points are awarded more than once for fulfilling similar criteria under the same or different credits, i.e. address double counting throughout the standard.

Recommendation (15) to the Concrete Sustainability Council: The Scheme needs to adopt a single and clear definition of stakeholder.

Recommendation (16) to the Concrete Sustainability Council: Make reference to existing good work, reports, tools, and other relevant documents in the technical manual.
4. Conclusions

A sustainability scheme should always aim at driving and accelerating the transition of industry and the supply chain towards improved environmental and social practices. While the raw materials used to produce concrete are currently non-renewable within the context of human time-scales, the Concrete Sustainability Council Scheme presents the opportunity to demonstrate the optimal use of resources, scarce or otherwise, through minimising inputs and maximising reclamation, reuse, and recycling, etc. Such a scheme can also place an emphasis on product design to minimise social and ecological disruption and impacts.

The Concrete Sustainability Council Scheme should aim at designing the whole cycle to be net positive. In this respect, CSOs highlighted the importance of taking a mitigation hierarchy approach (i.e. avoid, minimise, restore etc.) in a wide range of environmental and social issues, including biodiversity, water, climate change, local communities, etc.

CSOs emphasised the need to consider the local/national context in the design of the Scheme and for weighing the relative importance of the various credits. It is essential to strike the right balance between local and global issues, ensuring that individual sites remain able to address relevant social and environmental issues through ESIAs and EMSs.

The CSO participants welcomed being invited to comment on the Concrete Sustainability Council Scheme. However, they also felt their input would have been more useful had it been provided earlier on in the development of the Scheme.

CSO participants stressed that if cement and aggregate quarrying and production were not considered as a full part of the Scheme, it would be very difficult for them to support the Scheme. The Scheme’s governance should also be improved, particularly to include CSOs in the overall governance of the Scheme, as well as to ensure that auditors are truly independent.

Further to the input provided during the Stakeholder Consultation Meeting, CSO participants stressed the desire for there to be further and regular CSO input into the
Scheme as it evolves in the future, and offered their longer-term support to the Concrete Sustainability Council for compiling additional public feedback on the Scheme from their networks.
### Annex 1 – List of Participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
<th>Industry/CSO</th>
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<tbody>
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