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How could sustainability and sustainable development be understood based on stakeholder needs focus? – A preliminary suggestion

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1. Introduction

We tend to agree on that many things are not sustainable, but then the step from that to what is sustainable is often difficult. The state of sustainability, where nothing becomes waste, the circular economy (Geissdoerfer et al., 2017), is a theoretical concept, which in practice is very hard to attain. Only nature is sustainable in the way that there is no waste, everything is circulated. The Brundtland Commission defined sustainable development as: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987). The definition implies change towards a level of sustainability where the system can continue existing without altering the conditions for its future existence. The terms sustainable development and sustainability are often used interchangeably. Here, these expressions will be seen as slightly different. Sustainability is viewed as the level of sustainability and sustainable development as a change process. There is a broad understanding both by the common public and by researchers that current level of performance is not sustainable and that some changes are needed. However, it seems to be difficult to agree on what should be in focus and how the change strategies should look like.

The public debate tends to focus on one thing at a time with the risk of losing the system view. Sweden is a country that is highly ranked using different sustainability indices. It is e.g. the leader in the ROBECSAM country sustainability ranking (SAM, 2018). The Swedish climate activist Greta Thunberg has become a global icon fighting for the climate. Greta and environmental groups are forcefully advocating against flying. Flight shame - "flygskam" - has been introduced as a word in Swedish. Climate change is one of the two reasons that according to Steffen et al. (2015) could derail the earth system. The other reason is loss of biodiversity. Both of these issues relate to Planet in the Triple Bottom Line of People, Planet and Profit. The UN Sustainable Development Goals (SDGs) identify 17 goals that nations and organisations need to work with in the Agenda 2030 (UNSDG, 2015). The first of these goals is No Poverty, which could be viewed as a very important social or People indicator. In the Swedish sustainability debate, there is little about global poverty. It might be that the Swedish debate is biased by being a rich country where poverty is not a big issue. What is debated is travelling and tourism and how flying should be avoided with focus on reducing the carbon footprint.

Tourism is globally seen as an important area of business, representing some 10% of all global economic activity. It is a business that provides a number of relatively simple service jobs. For many countries, tourism plays an important role for the national economy and for employment. The UN SDG nr 8 - Decent work and economic growth (8.9), nr 12 Responsible consumption and production (12b) and nr 14 - Life Below Water (14.7) all take up the role of sustainable tourism in promoting jobs (UNSDG, 2015). Tourism is also important for Sweden with the income representing about 9.5 % of the Swedish GDP (Tourism, 2017). For many poor countries, tourism is a main source of income. E.g. the Maldives receive more than 60% of their foreign income from tourism. Travel to this small island state is often used as an example for flight shaming in the Swedish press. It is also one of the countries that will be the first to suffer from rising sea levels. Considerable resources will be required to mitigate the effects. The country would suffer considerably if tourism disappeared. In many parts eco-tourism provides means for safeguarding natural areas. E.g. Costa Rica has been successful with its focus on preserving natural habitats and by that attracting tourists. Flying is a problem for the climate and a precondition for most global tourism activities. This indicates that there might be a problem in only looking at the denominator and forgetting about the numerator. Eco Efficiency - comparing sales value with ecological harm needs to be taken into consideration (WBCSD, 2000). A simple example is looking at the value of tourism and its carbon footprint. Carbon

emissions from flying constitute about 2% of global carbon emissions. When the high-altitude effect is included this could go up to some 4%. In its extreme a no-fly strategy would save 2-4% of the global carbon emissions and probably reduce global tourism earnings with at least some 5-7%. More value than harm could be lost. The prevailing attitude for a sustainability strategy related to flying in Sweden is to use the train and to spend more holidays at home. The approach seems to be focused on reducing footprints without considering the value created and without too much focus on needed technological development.

Rockström et al. (2017) propose the Carbon Law, which means halving carbon emissions every ten years. This is what they calculate is needed to achieve the less than 2°C temperature increase goal by 2050. However, this is not enough. In addition, large scale technologies that reduce the carbon content in the atmosphere are needed corresponding to some 5% of the global carbon emissions. Technologies mentioned are such as Carbon Capture and Storage (CCS). Several tests are going on and the current cost for CCS are falling with an exact price being difficult to estimate. However, the magnitude in 2019 would be about 100 Euro/ton CO₂. The perceived public opinion in Sweden is that climate compensation is not politically correct. People should not be able to get away by paying for their sins. If all rich countries, which are those with most people flying, would adopt a strict change strategy of stopping all flying, this would probably stop most tourism to poor countries. These are often countries that historically are not responsible for the greenhouse gas emissions. Reduced tourism could increase poverty and would most likely reduce biodiversity when natural areas would lose their tourist potential. More rainforest would be cut down for planting export crops like palm oil and the remaining wildlife might end up as food. Lack of tourists could also reduce resources needed to safeguard cultural heritage. In rich countries like Sweden the result of reduced flying abroad would most likely benefit the local economy because of less export of tourism capital. There has seemingly been no discussion in Sweden on introducing a carbon tax for foreign tourists arriving by air. This could be an alternative to show commitment without making other countries pay. The export value, international visitors' consumption in Sweden, was about 10 billion Euro in 2014. The industry is employing almost 160.000 people. A tax on carbon emissions of some 100 Euro/ton CO₂, corresponding to the cost of CCS, would probably reduce the number of arriving tourists and might reduce flying. Unemployment would increase, but it would not make Swedes poor and it would not jeopardize taking care of natural and cultural heritage in Sweden.

Properly managed tourism has many benefits such as creating better understanding of other cultures, boosting economy for those needing it, helping in preserving national and cultural heritage and reducing tensions between countries. Flying has to pay for its externalities and it would be reasonable to have a price for emissions. Climate compensation is one way of doing this. When working well the money could go to funding projects that reduce carbon emissions and that develop solutions for e.g. CCS. This hopefully would speed up the technological development. The example with tourism indicates that sustainable development is important, but it might not be that easy to understand, define and operationalise.

If sustainable development in the national Swedish context is unclear, a global leader in sustainability, it could be that organisations generally, still would be struggling to define what sustainability is for them. Here, the word organisation is used for both companies and other organisations. Most organisations are under pressure to improve their sustainability. This puts focus on the management and transparency of organisational sustainable development. One way of demonstrating commitment is by publishing sustainability reports. Companies and organizations are increasingly asked to take their responsibility for sustainable development. Already, most larger companies present yearly sustainability reports. In Sweden this is

mandatory since 2017 for larger organisations. The Global Reporting (GRI) Initiative standards are widely used as directives for reporting (Lozano, 2016). Still, sustainability reports seem to vary considerably in structure and content. Isaksson and Cöster (2018) note that out of some 40 studied Swedish sustainability reports, many from international companies, only about 20% report performance in the entire supply chain, which is recommended by GRI. This is in spite of more than 90% of the reporters in the study referring to or reporting according to the GRI guidelines. Generally, this results in a relatively low assessment of sustainability reporting quality in the study. Varying reporting quality makes interpretation and the use of reports for management complicated.

Several models for assessing sustainability maturity exist based on varying types of criteria. Correia et al. (2017) carry out an extensive literature study on sustainability maturity models for supply chains identifying four studies dealing with supply chain sustainability and seven with sustainability. One conclusion in the paper is that the rationale for scope and stakeholder needs is not clear and that transparency requirements are not defined. Generally, there is great variety between the 11 studied models. All assessments are seemingly based on analysing different enablers in order to define the maturity. Practically all approaches are based on an inside out approach, such as studying the existence of standards like GRI and ISO 26000, capabilities of governance or strategies, the presence of which are then used as an indication for the level of maturity. Many of these models require information that is not publicly available. Sustainability is only inferred, not measured as a performance compared to externally anchored targets.

It could be that in spite of focus on sustainability and sustainable development that both the common public and research might have problems in truly understanding what sustainability and sustainable development mean on an operational level. How could a fact-based answer be obtained on what sustainability and sustainable development are? One way of trying to make sense out of this is to base an analysis on stakeholder needs focus and principles from Quality Management. There seems to be little written about how to use an outside in approach starting on the global level. Who are the main stakeholders, and which are their needs? Isaksson (2019a) proposes the atmosphere, the biosphere and people living in extreme poverty as the priority stakeholders on the global level. This is based on an analysis starting mainly from the Planetary Boundaries framework and the UN SDGs. These three stakeholders and their needs could be used to exemplify work with sustainability and sustainable development on an organisational level.

The purpose of this paper is to contribute to the understanding of organizational sustainability and sustainable development based on a needs-based approach. Additionally, the level of current sustainability understanding will be discussed. The following research questions (RQ) have been formulated:

RQ1: How could understanding sustainability be described?

RQ2: How could sustainability and sustainable development be measured?

RQ3: How could the level of sustainability and sustainable development be assessed?

This paper is a preliminary work being the first iteration.

2. Methodology

Quality Management principles based on customer needs focus are translated to stakeholder needs focus. The process management approach of outside in combined with the Pareto

principle are used to identify global stakeholders and stakeholder needs as a starting point for understanding and defining sustainability and sustainable development on an operational level. The generic and “common sense” maturity structure used by Isaksson and Hallencreutz (2008) forms a good base. They work with a sustainability maturity model for organizations which has five stages. These are: 1) Understanding, 2) Defining, 3) Measuring, 4) Communicating and 5) Leading Change. The different stages are discussed based on deduction from quality principles. This is combined with support from literature that has a stakeholder focus and with support from the GRI standards. Some business examples are used to highlight the logic.

3. Results

In this chapter theories and models that could be used to support understanding sustainability are discussed. Focus is on understanding, but some work is also carried out with defining, measuring, communicating and leading change for sustainable development. Results are presented as a combined review of theory background and theory development.

3.1 How could understanding sustainability be described?

In this section elements needed to understand sustainability are discussed. There is some overlapping with the different stages. E.g. in order to see that sustainability has been correctly understood, this might require examples of definitions and indicators.

3.1.1 Transparency and commitment

When it comes to assessing any organisation, the prerequisite is that there is sufficient transparency enabling collection of information needed. This information should be readily available and ideally it should be possible to assess an organization’s sustainability maturity based on their sustainability report. The GRI guidelines specifically state that: “The Standards are designed to enhance the global comparability and quality of information on these impacts, thereby enabling greater transparency and accountability of organizations“ (GRI 101, p3, 2016). This would enable easy and rapid access for those interested. A company management that is committed to sustainable development should have a mission statement for this which is publicly communicated. Many international organisations provide one overall report. This is the case for e.g. Heidelberg Cement, one of the global cement producers (Heidelbergcement, 2017). They own the Swedish company Cementsa that has a cement plant on the island of Gotland in Sweden. This is one of Northern Europe’s largest plant with a capacity of some 2.5 Mtons of cement per year. The plant is one of the top emitters of CO₂ in Sweden with emissions at a level of about 1.7 Mtons of CO₂ per year. There are also issues of local water management and biodiversity affected by the quarry operations. Still, there is no specific sustainability report for the company in spite of important impacts that are of interest for different stakeholders. Sweden has since 2017 a law that requires all larger companies to issue a sustainability report. Cementsa qualifies as a larger company but since it is part of the Heidelberg Cement group it seems to be enough when there is a group level report. Little or no information on sustainability performance can be found on the Cementsa web-site. It could be a general problem with transparency that large companies have a central function preparing a general sustainability report which has little or no relevance to specific companies. From a practical point of view the transparency could be seen to be very low and this could also be taken as a sign of lack of commitment.

GRI writes that sustainability reporting is an organization’s practice of reporting publicly on its economic, environmental, and social impacts, both positive and negative and is therefore part of sustainable development (GRI-101 2016). Reporting is described in the GRI standard 101 as content and quality. The GRI-101 (2016) defines reporting principles for content as; Stakeholder inclusiveness, Sustainability Context, Materiality, Completeness. Using the

example of Cementa it could be argued that none of these principles are being respected. Assessing the sustainability of a company requires a scope that is manageable. Assessing sustainable development at global corporate level with a business which is operating on most continents including poor developing countries is not doable in any detail.

3.1.2 Scope of reporting

In order to do the right thing, the right scope must have been chosen. The GRI content principles could be seen as the part defining the right thing. The Context will define inclusiveness, materiality and completeness. Choosing a limited context like not using the value chain as a base will change the preconditions for the other principles. GRI writes that: “The organization describes how economic, environmental, and/or social topics relate to its long-term strategy, risks, opportunities, and goals, including in its value chain.” (GRI 101, 2016:9). The value chain is by GRI defined as: “The value chain covers the full range of an organization’s upstream and downstream activities, which encompass the full life cycle of a product or service, from its conception to its end use” (GRI Glossary, 2016:18). This definition is often described as cradle to grave. McDonough and Braungart (2010) criticize this approach for having a linear logic and advocate instead for the cradle to cradle approach. As a goal this is correct, but for describing current reality the cradle to grave is deemed to better represent reality. It has become common in sustainability reports to draw circles where often activities and resources are mixed, but where the creation still is called value chain. Often this creates more confusion than clarity. Therefore, for the purpose of visualization it is better to follow ordinary process notation and describe the value chain as a process. Simple flowcharts could be used to describe the value chain from cradle to grave. When this process works well there is nothing left for the grave.

In many cases companies do not seem to report for the value chain but only for parts of it. Isaksson and Cöster (2018) report that only about 20% of some 40 studied Swedish sustainability reports clearly measure their carbon emissions in the entire value chain. The GRI is following the GHG protocol which has established a classification of GHG emissions called Scope 1-3. Direct GHG emissions are Scope 1, energy indirect emissions are Scope 2 and other indirect emissions are Scope 3. Many companies use this reporting which could help in detecting if CO₂ reporting is for the entire value chain. For e.g. food production the value chain goes from producing crops over food processing, sales and consumption to waste. None of the three largest Swedish food retailers report the entire carbon footprint in the value chain, but only a limited part coming from internal transports and managing shops (Isaksson and Cöster, 2018). This risks of distorting the information to readers of the sustainability reports, like when one of the retailing companies boasts with producing 100 000 Euro of value for each ton of CO₂ when the result in the value chain is about 2500 Euro/ton CO₂. The difference is mainly due to exclusion of important steps in the value chain like agricultural production where most of the footprint is created. In the food production value chain, the retailer is a dominating actor and the one that decides which products to promote and therefore can influence the entire value chain performance. In the clothes retail sector reporting seems more often to be for the entire value chain. This probably is due to the pressure that companies have been put under from watchdogs to declare both social and environmental upstream issues including cotton production and garment production.

There could sometimes be discussions on what cradle and grave are. For value chain of providing food the start of the value chain would include input materials to agriculture and the footprints that these come with. It should not be necessary to start studying the fertilizer producers, but incoming main impacts such as CO₂-prints should be recorded and added to the total supply chain performance. A “variable footprints costs” approach could be applied for

existing value chains. That is, investments in e.g. factories would not be included (Isaksson, 2019a). The grave for providing food includes how the food is transported home, consumed and the waste that it produces. Food retailers can affect the quantity e.g. by the choice of packaging and the unit size. For services like tourism the cradle to grave could be more difficult to apply. Here, the starting point could be the place of departure and the place of return for the customers and employees. Also, processes such as booking the tourism services would be included. There might not always be an exact right or wrong, the important thing is to be clear on what is included and what not in the value chain.

Companies only reporting for parts of the value chain frequently motivate this with the difficulty of finding correct information. However, clothes retail companies do this and it most likely is not any easier to find out all the footprints of cotton production in developing countries than finding these for meat and dairy products in Sweden. The most likely reason for not considering the value chain, like in food retailing, is that there has not been pressure on doing this, which also could be a sign of limited management understanding and commitment.

3.1.3 Identifying stakeholders

When the scope, being the value chain from cradle to grave, has been defined then it makes sense to identify stakeholders and to do a materiality analysis. Here, the common way of doing the materiality analysis is to identify stakeholders such as customers, employees, shareholders society etc. and then to compare the needs of these with the significance for the company. This seems often to miss considering global Planet and People stakeholders. This risks of making the materiality analysis limited and thereby missing important stakeholders and their needs.

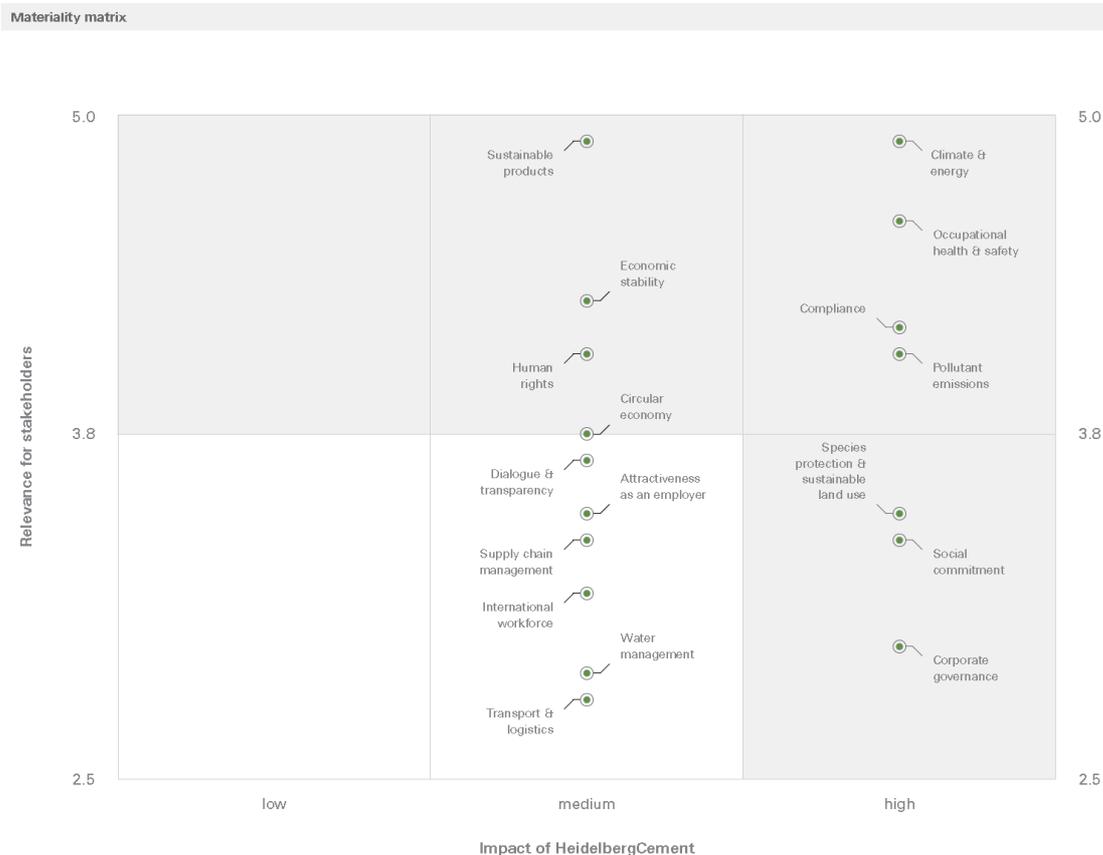


Figure 1. Materiality analysis for Heidelberg Cement (Heidelbergcement, 2017).

Using the Pareto principle Isaksson (2019a) suggests that the main stakeholders on a global level are climate, biodiversity and people living in extreme poverty. These stakeholders should always be considered by all organizations when doing a materiality analysis for their sustainability reporting. In addition, there could be company specific impacts on important global or regional stakeholders that need to be highlighted. This could be compared with the materiality analysis of companies. Here, two examples are discussed. In Figure 1 the Heidelberg Cement (2017) materiality analysis is presented. The priority issues that emerge in order of priority are climate & energy, occupational health and safety, compliance and pollutant emissions. Climate is there and is highly relevant with the cement industry being responsible for some 7% of global carbon emissions (WBCSD, 2018). This is about twice the amount from flying when including the high-altitude effect. Since cement mostly is business to business there is little focus on this in the press. The social part in the Heidelberg Cement report deals with occupational safety and health, which is relevant. However, it does not address poverty. People employed by a multinational organisation do not generally belong to the group of people living in extreme poverty. The effect of cement price and the cement performance as building value per price affects a much larger number of people and has a severe effect on poor people. Species protection and land use comes on the list after pollutant emissions and is marked as important for Heidelberg Cement, but is considered of being only of medium relevance for stakeholders. Loss of biodiversity is like climate change a major global problem. The effect of the entire building value chain on land use is significant.

The ICA group, one of the large Swedish food retailers identify 13 priority areas in their materiality analysis (ICA, 2018). The three first ones deal with customer health. The fourth is environment and climate adapted products. Climate is a major issue for the value chain of providing food. In Sweden the carbon footprint based on consumption is close to 11 tons per person and year out of which about one quarter relates to food. This would have merited putting effects on climate as number one. There is no explicit mention on effects on biodiversity where the global food industry plays an important role. E.g. consumption of meat drives consumption of fodder for animals like soya beans which drives deforestation. The same applies for palm oil which is used in a variety of products. Biodiversity should have been put as number two. Poverty is not an issue in Sweden and therefore the price of products might not be a priority issue. Poverty could be affected by the choice of suppliers for food raw materials. It would therefore have earned a mention in the list of priority areas.

The two examples support the background picture that there might be difficulties in understanding what sustainability is. A prerequisite for identifying stakeholder needs is that the correct stakeholders have been identified. In both examples presented important stakeholders have been missed.

3.1.4 Identifying stakeholder needs

For identifying stakeholder needs the TBL of Planet, People and Profit can be used. For Planet the best global references are found in the Planetary Boundaries framework that identifies a safe operating space for humanity and define nine limits (Rockström et al. 2009). For People some of the 17 SDGs are relevant. The nr 1 No Poverty could be seen to relate to other goals such as Zero Hunger (2), Good Health and Wellbeing (3) and Quality Education (4). The UN SDGs are for nations and many of the 169 underlying targets are not directly suitable for organisations. However, organisations could study how people such as employees, customers and others are affected by the value chain activities. For Profit the stakeholder needs of the shareholders could be discussed. The commonly seen objective is profit maximisation, which might not always be compatible with ethical sustainable behaviour. This is further discussed

under sustainability indicators. A Profit need is to generate a surplus which ensures continued business.

3.1.4 Change strategy - goals and speed of change

For an organisation to have demonstrated a proper understanding of what sustainability means it should have identified its significant sustainability impacts in the value chain and have related those to company processes. Significant sustainability impacts should be related to global requirements and should include a review of impacts on climate, biodiversity and extreme poverty (Isaksson, 2019a). In order to demonstrate sustainable development, the organisation should have presented a strategy for change towards a correctly defined level of sustainability for the main impacts that have been identified. The speed of change should be such that a level of sustainability is reached within the time frame required. These requirements should be based on minimised risks of system collapses.

3.1.5 Defining sustainability and sustainable development, communicating and leading change

Here, it is proposed that sustainability is viewed as a level of sustainability, equal to when a level of quality is defined (Isaksson, 2013). This is an operational definition which enables assessing levels of performance. Sustainable development indicates that it is a change process. Most organisations have not achieved a level of true sustainability (Isaksson and Steimle, 2009) and would need to work with change towards this level. The speed of change could be assessed. When this speed is high enough to achieve a true level of sustainability within the time span available. This would be e.g. reducing carbon emissions with a speed that keeps global warming under 1.5 or 2°C, whichever is the scientifically most relevant.

How sustainability and sustainable development could be measured is discussed under 3.2. The communication of the performance should include an assessment of the level of sustainability and when the organisation is counting on achieving a true level of sustainability. Here, the GRI quality indicators accuracy, clarity and reliability could be referred to. Leading change would require demonstrating leadership by having a performance which is above others in the branch. Leading change could also include a change in the business idea with results demonstrating increased customer needs satisfaction compared to footprints. This is based on the idea that performance would be mainly measured based on contribution to identified needs and not on sales.

3.2 How could the level of sustainability be measured?

Based on the old adage of “what cannot be measured cannot be improved” doing the thing right requires good performance indicators for the main sustainability impacts in the entire value chain. GRI defines reporting quality as: Accuracy, Balance, Clarity, Comparability, Reliability, Timeliness (GRI 101, 2016). Isaksson (2019b) proposes a maturity model for assessing the measurement quality of sustainability reports based on a Quality Management logic. The approach is based on a process doing the right thing in the right way. The right way is proposed to include: 1) indicators that correctly describe stakeholder needs; 2) targets that are derived from global requirement; 3) indicators that are both absolute and relative.

3.2.1 Choice of sustainability indicators

Sustainability impacts can be categorized based on the TBL. Planet indicators are proposed to be related to the Planetary Boundaries framework and People indicators to relate to the UN SDGs. The GRI standards propose 33 indicator groups in the form of standards. These are categorized based on the TBL in the 2xx (Profit - 6), 3xx (Planet-8) and 4xx (People-19) series.

For the important Planet stakeholder Climate there are several proposed indicators within the topic GRI 305-Emissions (2016). There are indicators for the different GHG Scopes 1-3. For the other important impact of biodiversity there is the topic GRI 304-Biodiversity (2016). This indicator is more focused on specific operations and does not seem to have the same value chain focus as GHG-emissions. Poverty is mentioned in the GRI standards, but mostly in connection with issues related to child and forced labour and abuse of the labour force. There is a topic GRI 401 Employment (2016), which could be seen to relate to poverty reduction. However, focus is on how employees are taken care of and not so much with how employability is affected in the value chain. Isaksson (2019a) suggests that companies might have to focus on increasing their needs value satisfaction by actively combating poverty in the value chain. This is partly mentioned in GRI 203 (2016:5) as “Examples of significant identified indirect economic impacts of the organization, including positive and negative impacts”. Generally positive impacts are not that clearly presented in the GRI standards.

The Profit dimension might be the most difficult to assess properly. When John Elkington coined the expression TBL in 1994, focus still was clearly on maximizing profit and environmental and social issues were secondary. This view seems largely to have been retained. (Isaksson, 2018). Companies issuing integrated sustainability reports, which is supported by the GRI, often augment their ordinary financial reporting with information on environmental and social issues and present this as a sustainability report. With increasing resource scarcity, it is questionable if profit maximizing is the main mission for organisations or if there should be a paradigm shift in the primary focus where excellence and economic success come from being sustainability leaders (Isaksson 2018), (Isaksson 2019a). The main economic value parameter is described in the GRI 201-1 (2016) as economic value created. This enables comparing the economic performance of different businesses based on monetary values only. Issues like customer needs value satisfaction or utility are not included. Using the sales value as basis makes it easy to compare with companies from different businesses, but it also means that the business idea of the company does not become part of the sustainability assessment. A company producing tobacco could be presented as having a higher level of sustainability maturity than a company producing ecologically based baby food. Isaksson et al. (2010) propose price as an important People indicator. For poor people the price of products has a significant effect on the level of poverty. There is a conflict here with profit maximisation and providing value for harm to customers. Isaksson et al. (2015) argue in the “Crippled Bottom Line” that focus should be on People and Planet and that Profit is only a means to an end. Companies need profit to survive, but this should be based on being the best provider of user needs value per harm done. There seems to be no good system of assessing sustainability contribution in terms of user needs value satisfaction compared to harm done. Focus in value creation from a sustainability point of view should be on satisfying the main global needs. For the climate this is relatively easy expressing this as absolute emissions of tons of CO₂ or CO₂-equivalents per year. Relative measures could be such as sales value per CO₂ and more generically as user value per carbon emissions (Isaksson et al. 2015). For biodiversity it becomes more complicated. Here, the effects on the Biodiversity Intactness Index could be used based on both absolute and relative indicators (Isaksson, 2019a). Effects on poverty in the value chain would also be difficult to assess. Some orientation is provided by GRI 203 (2016). Basically, it could be about how employability for those needing it is promoted in the value chain (Isaksson 2019a).

3.2.2 Setting targets

If finding a good indicator is the first thing for doing things right, then the second is having relevant targets. Measurements require targets, which should be set based on external

requirements, such as those described by the organization Sustainability Based Targets that mainly works with climate issues. But, the same logic could be used for other Planetary Boundaries. Haffar et Searcy (2017) study leading Canadian companies and their environmental sustainability reporting with the purpose to explore the extent to which companies are setting organization-centric versus resilience-based environmental targets in their sustainability reports noting that practically none of the identified targets were quantitatively tied to the Planetary Boundary thresholds. This, in spite of the environmental dimension being the one with probably the clearest targets like with carbon emissions. This indicates that finding the right company targets still is a challenge.

3.2.3 Absolute and relative indicators?

A third thing for doing the thing right is to use both absolute and relative indicators. Absolute indicators are needed to assess the magnitude of the impact. For impacts like carbon emissions affecting climate there could be quotas and taxes that companies need to relate to. Relative indicators are important for promoting improvement and for identifying best performers. Here, the value per harm concept being a development of the Eco Efficiency is used (Isaksson et al. 2015). The difference with Eco Efficiency is that focus is on user value not on sales value. The value per harm compares main stakeholder value to main stakeholder harm like e.g. for transports where person*kilometres constitute the main value and carbon emissions form the main harm. The main social harm is defined as cost or price of the product. The sustainability level of measuring would thus require Key Performance Indicators (KPIs) that operationalize main stakeholder needs and express these with absolute and relative indicators. The KPIs need to be related to externally set targets based on global goals and limits.

3.2.4 Measuring the level of sustainability and the change towards sustainability

Doing things right should also include a clear logic for presenting the actual situation and for presenting the change. The level of sustainability is an output from the operational processes and can be expressed in absolute and relative indicators, but also as an average and a variation. Often consistency is better than variation which is similar to quality performance. GRI proposes some change indicators like 305-5, reduction of GHG emissions. This might be confusing since all indicators could be presented as trends. For measuring the speed of change and to what extent change is sustainable, trends should be presented for all important impact indicators. In Statistical Process Control a trend for individual values can only be defined after seven measurements. This means that trends should be presented over 7 years or more when working with yearly sustainability reports. The level of sustainability is the current position of the performance for the chosen indicator. The rate of change towards a true level of sustainability assesses whether the change could be categorised as sustainable development or not.

3.3 How could the level of sustainability and sustainable development be assessed?

Here, the results from 3.1 to 3.2 are summed up. The identified elements are linked to the different stages in the five-level maturity scale. The results in Table I should be seen as a first proposal. Most of the areas identified need to be further elaborated.

Table I. Elements to clarify content in sustainability maturity

| Stage | Element | Comment |
|-----------------|--------------|--|
| 1.Understanding | Transparency | A precondition for evaluation is that information is available. Transparency is also a core principle for sustainability. |

| Stage | Element | Comment |
|-------------------|---|---|
| | Commitment to sustainability | Management has clearly declared commitment to sustainable development which means that reports are at an operational level that enables sensemaking (plant level) |
| | Scope of reporting | Understanding joint responsibility for supply chain performance from cradle to grave |
| | Stakeholder and stakeholder needs identification | Main stakeholders for People and Planet in the supply chain including Climate Change, Biodiversity and Poverty |
| | Commitment to a speed of change that corresponds to needs for sustainable development | A rate of change that achieves a level of true sustainability within the time available |
| 2. Defining | An organisation specific definition for sustainability for key impacts and a defined change process for these key impacts | The organisation should clearly demonstrate that it has understood its responsibility in making sustainable development happen |
| | Describing the interfaces of the organisation and the value chain | It should be clearly defined for which processes reporting is done. Reporting of main impacts should be for the entire value chain |
| | Visualisation of the value chain from cradle to grave and the part of it the company is directly responsible for | Clarity is needed to confirm the company interpretation of sustainability |
| | A strategy for change | An explanation of how a level of sustainability is going to be reached |
| 3. Measuring | Relevant indicators describing performance of main impacts | Use of absolute and relative indicators for value chain and company performance |
| | Externally based targets representing a state of sustainability | Targets based in Planetary Boundaries framework and the UN SDGs |
| | Describing performance of main impacts over time | It should be possible to see how the organisation is making progress towards a state of sustainability |
| 4. Communicating | Issuing sustainability reports that provide the required information to assess performance and improvement | Information not found will be viewed as non-existing |
| 5. Leading Change | Comparative performance showing that the organisation is a leader in its business | Leading in sustainability performance and in speed of change towards sustainability including |

| Stage | Element | Comment |
|-------|---------|---|
| | | change of business idea to better cater for urgent People and Planet needs. |

4. Conclusions

This paper has discussed sustainability and sustainable development on an organisational level. Below follows a brief summary for proposed answers to the three research questions (RQ).

4.1 RQ1: How could understanding sustainability be described?

The answer to this question is as a summary presented in Table I under the part of understanding. The five core elements identified are: Transparency, commitment to sustainability, scope of reporting, stakeholder and stakeholder needs identification and commitment to a speed of change that corresponds to needs for sustainable development.

4.2 RQ 2: How could sustainability and sustainable development be measured?

The proposed answer is to define organisational sustainability based on how the organisation performs with the most important global impacts in the value chain of the company. The value chain is defined as going from cradle to grave. All organisations should relate to climate change, biodiversity and poverty. The company performance is measured as a level of sustainability compared with a globally set target. The rate of change towards the target is assessed to judge whether change is sustainable or not. When change is quick enough to achieve a true level of sustainability in the value chain within the time frame available, then this could be called sustainable development.

4.3 RQ3: How could the level of sustainability and sustainable development be assessed?

The results from Table 1 could be used as a basis for evaluating organisations by studying their sustainability reports. The first requirement of transparency supposes that the studied organisations shares the required information. Not doing this would signal lack of commitment to sustainability. The sustainability maturity scale presented by Isaksson and Hallencreutz (2008) is done in stages. However, it is likely that organisations would have done something at different stages even if there are problems with understanding. Taking the example of Heidelberg Cement, they have correctly identified climate change as a main issue and are measuring emissions which are communicated in the sustainability report. On the other hand, they have not showed proper understanding of the effects on poverty that cement prices have. In Table II a conceptual matrix is presented where the five maturity stages are further divided into levels of performance.

Table II. A proposed conceptual idea of a maturity matrix assessing sustainability enablers and results with an example using Heidelberg Cement (2017) sustainability report for the part of understanding.

| Stage/Performance | Very low | Low | Medium | High | Very high |
|------------------------------------|----------|--------------------------------------|--|------|-----------|
| 1.a Understanding - climate change | | | Top priority but with focus on plant level | | |
| 1.b Biodiversity | | On priority list but for plants only | | | |

| | | | | | |
|-------------------|---------------|--|--|--|--|
| 1.c Poverty | Not mentioned | | | | |
| 2. Defining | | | | | |
| 3. Measuring | | | | | |
| 4. Communicating | | | | | |
| 5. Leading Change | | | | | |

The main stakeholders and their needs could also be used to study defining, measuring, communicating and leading change. Additional stakeholder and stakeholder needs could be added based on specific priorities. The matrix could be made more detailed by using all the elements in Table I.

5. Discussion of results

The purpose of the study has been to discuss how sustainability and sustainable development can be understood and to some extent how it appears to be understood. Isaksson (2019b) propose a maturity grid for the sustainability measurement based on the logic of doing the right thing in the right way. The starting point is in global needs. Compared to Isaksson (2019b) the results of this paper go further by looking at understanding in more depth and by including the business idea and what is done into the sustainability assessment. The results are only indicative but point at a possible problem with poor understanding of what sustainability is. This is when it is accepted that sustainability should be defined based on main global needs, which would seem logical. The GRI standards are the dominating reporting structure and are based on logical principles. There are however some problems, where the main problem could be that value is only seen as sales value and not as user value. The Profit dimension would probably need a thorough revision enabling the including of customer needs value and also an assessment of the sustainability of the business idea. When counting money only there is no difference in value, but when changing to user needs value this changes dramatically. Profit would have to be redefined as value for stakeholders. The GRI has little or no focus on customer value. Another issue with the GRI is that the structure of indicators could be discussed. Having indicators for change might be superfluous. Instead all indicators should be viewed as average, variation and trends. For other parts, like in defining the value chain the GRI standards seem to be relevant. Here, there seems to be a problem that GRI-reporters are not following the recommendations. This means that there could be a problem both with the approach and the deployment of the approach. Understanding and working with sustainability and sustainable development seems to need more clarification. In this work applying Quality Management principles with focus on global stakeholder needs value seems to be a viable strategy.

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