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Strategic sustainability procedures: focusing business planning on the socio-ecological system in an island context

Abstract

This article illustrates how strategic sustainability procedures (SSPs) can be applied in the tourism accommodation sector in the Caribbean island of Grenada. SSPs are conceptualized from an adapted framework for strategic sustainable development (FSSD). Part 1 of the adapted FSSD defines the vision for the sustainability of the socio-ecological system or a vision for sustainability. Part 2 describes sustainable development processes and actions that businesses can implement to move towards the vision. These two systems exchange materials, energy and waste flows (MEWFs). The article shows how strategic actions to optimize MEWFs between the systems can lead to the vision for sustainability. Utilizing a mixed methods approach, "visioning and vision linking", "developing sector strategic actions", and "monitoring and evaluation", were formulated into SSPs in an island context.

Keywords: framework for strategic sustainable development (FSSD); socio-ecological system; sustainable development policy; strategic planning; Grenada; tourism

1.0 Introduction

Globally, businesses tend to sideline the socio-ecological system in which they operate and upon which they depend (Reeve, 2011; Boyd and Frears, 2008). Even in cases where businesses plan to become more sustainable enterprises, embarking on Elkington's (2004) triple bottom line approach, the dominant outcome focuses on financial performance. Therefore, this article argues, that this financial performance outcome must be complemented with stronger strategic planning that focuses on the socio-ecological system.

Such planning must begin with a sense of responsibility to and understanding of the system itself. This comprehension is premised on the idea that sustainable development and sustainability are related, albeit with different definitions. They are like cogs in the same wheel. *Sustainability* can therefore be a vision for the socio-ecological system (referred to as a vision for sustainability in the rest of the article), while *sustainable development* becomes a tangible and actionable set of processes that occur within the operations of the business.

In this article, the interrelatedness of these concepts is demonstrated using materials, energy and waste flows (MEWFs). From this perspective, businesses can be viewed as operating within the socio-economic system; while they exchange materials, energy and waste (MEW) with the socio-ecological system. By embarking upon strategic actions within their operations that optimize and/or reduce MEWFs between the systems, businesses emphasize planning towards the vision for sustainability. Illustrating how this can be applied, we develop and test a set of strategic sustainability procedures (SSPs) in the tourism accommodation sector in the small Caribbean

island of Grenada. Additionally, we establish how these procedures can seamlessly align to the businesses' "normal" strategic planning processes.

Section 2.0 of the article provides a review of the key theories and concepts, and further lays out the central argument of the research. In Section 3.0, the case study which was used to develop the proposed SSPs is introduced. Section 4.0 reports on the methods used and the key results, whilst the SSPs are presented and discussed in Section 5.0. Conclusions and recommendations are then presented in the final section.

2.0 Literature review: key theoretical perspectives

2.1 The socio-ecological system

The "global" socio-ecological system is rarely the main focus of strategic planning. Many global businesses plan towards sustainability and to become sustainable enterprises. They may even apply and report on sustainability performance using the triple bottom line approach (Elkington, 2004). Despite this, the outcome of planning is dominated by financial success. For example, Epstein (2008: 38) highlights the importance of this by indicating that:

> "To become a leader in sustainability, it is important to articulate what sustainability is, develop processes to promote sustainability throughout the corporation, measure performance on sustainability and *ultimately* [author's emphasis] link this to corporate financial performance".

The ultimate goal is primarily located inwardly on corporate financial success and not outwardly on the sustainability of the socio-ecological system. It is, however, critical that businesses have such an outward look, as they operate within global socio-ecological system limits (Boyd and Frears, 2008). Moreover, Reeve (2011) points out that, in the context of sustainability and sustainable development, businesses wishing to operate in perpetuity should focus on success and survival within the socio-ecological system. It is imperative therefore, that businesses should have a balanced focus on financial performance and on the socio-ecological system and the specific challenges that this presents.

According to Boyd and Frears (2008: 2-1): "businesses must operate in the long term subject to a dwindling supply of natural resources and increasing social concern for intergenerational equity". In other words, businesses must realize that social and ecological pressures can threaten and affect their very existence. Boyd and Frears (2008: 2-2) further state, that businesses draw materials and energy from the natural environment and they: "are transformed into economic products by production processes and eventually consumed by consumers".

The extraction of materials, the provision of energy, the production process, and consumption all generate waste. These waste streams are usually discarded into the natural environment. To varying extents then, all businesses depend on MEWFs for their success and survival. According

to Dittrich et al. (2012: 9): "whatever materials humans extract from their socio-economic system, sooner or later becomes waste".

Businesses also operate subject to social pressures. In this regard, Boyd and Frears (2008) note that ethical-social limits which deal with the decision to satisfy the needs for industrial growth at the expense of other non-human species, through the continuous depletion of energy and materials, should be of concern to the operations of business. Businesses, which operate within the socio-economic system, therefore depend on exchanges of MEWFs between the system in which they exist and the socio-ecological system. Understanding this dependence and its nature provides a basis upon which businesses can address both the challenge posed by the socio-ecological system and plan towards its sustainability.

The idea of a safe and just operating space for humanity (see Leach et al., 2013; Raworth, 2012) also aptly describes a social foundation and ecological upper boundary within which businesses can endeavour to operate. Rockström et al. (2009a) note, that since the advent of the Industrial Revolution, the period of relative stability of the planet's environment, known as the Holocene, was greatly disturbed; and we are entering into a new Era of the Anthropocene, in which humans are the main drivers of global environmental change. This new era has pushed: "the Earth's system outside the stable environmental state….with consequences that are detrimental or even catastrophic for parts of the world" (Rockström et al. 2009a: 472). In this regard, planetary boundaries, described as a set of bio-physical processes, which regulate the Earth System (Steffan et al., 2015; Rockström et al., 2009a; Rockström et al., 2009b), can guide business operations.

Raworth (2012: 7) further argues, that one of the first priorities of sustainable development is to ensure that all people are free of human deprivations, such as poverty, hunger and illiteracy, while recognizing that humanity's use of natural resources to fulfil these needs must be tempered by environmental boundaries. Raworth (2012) presents a picture of a safe and just space that is enclosed within this lower social foundation, of needs, such as food, water, energy and upper environmental limits, defined by planetary boundaries. This depiction also provides a social-ecological lens through which businesses can see their operations and a premise upon which the socio-ecological system can be understood.

Therefore, with the knowledge of the pressures MEWFs can place on the planetary boundaries and the significant importance of these flows to the business, a clearer understanding of the role of the socio-ecological system can be achieved. In this regard, the sustainability of the socio-ecological system (Haberl et al., 2004) can be viewed as an "external vision" that businesses aim to achieve. Conversely, sustainable development should be a set of strategic processes and actions (e.g. Korhonen, 2004; Porritt, 2007; Reeve, 2011; Everard, 2011), which businesses implement in an attempt to achieve the vision. Everard (2011: 39) clarifies: "whilst sustainability is a 'state' of indefinite continuance, sustainable development is a process of development from where we stand today towards that ideal state".

The Earth System, which was present in an Era of the Holocene for over 10,000 years, further epitomized sustainability (Rockström et al., 2009a). It is proffered therefore, that a focus on this desirable Holocene state should form a critical component of business strategic planning, as businesses should play an important role in moving towards sustainability. Hart (2007a: 3) argues: "that business - more than either government or civil society - is uniquely equipped at this point in history to lead toward a sustainable world in years ahead".

This role can be practically demonstrated if businesses operationalise sustainable development. From this perspective, the internal activities, actions, processes and strategies that businesses embark upon can be aligned to a vision for sustainability. In this respect, the vision can be the reduction in MEWFs, while seeking to maintain a good quality of life for people. The vision however, should be based on principles that can be easily measured and assessed. These are presented in Section 3.0.

2.2 The planning framework for sustainability

A vision for sustainability requires the alignment of business processes and strategic actions for reducing MEWFs. However, what has happened in many cases is that businesses embark on internal sustainability strategies (Harmon et al., 2009) and strive towards becoming global sustainable enterprises (Hart, 2007a), without a clear outward understanding and vision for the socio-ecological system. However, the basis for doing so was demonstrated by Harmon et al. (2009: 90) who suggested that: "Viewed through a sustainability lens, a sound, well-aligned organizational strategy….must be green and socially responsible if it is to succeed in the moderate to long term". Moreover, Hart (2007b: 237-278) points out that corporate vision, mission and strategic goals are key organizational infrastructure that need to be aligned with the vision for sustainability.

To ensure that businesses are provided with a clear approach to aligning their internal vision, mission, goals and strategies with the vision for sustainability, frameworks need to be applied. Relative to other frameworks (e.g. the Helmholtz concept proposed by Harthmuth et al., 2009), the framework for strategic sustainable development (FSSD) developed by Robèrt et al. (2004), provides an excellent planning frame for achieving this. The FSSD is robust and hierarchical, but simple in its application. It also effectively separates sustainability from sustainable development, but supports their congruence; and it seamlessly aligns with the normal strategic management and planning processes used by businesses. The proposed framework further supports the application of strategic thinking within the idea of sustainable development.

From the perspective of the latter, Baumgartner and Korhonen (2010: 71) posit that: "approaches used in sustainable development are reductionist and often lead to problem shifting and displacement". Addressing this, "strategic thinking" and the "dimensions of strategy process, content and context" must be applied (Baumgartner and Korhonen, 2010).

This provides the first theoretical aspects of the research to be addressed. In other words, the key strategy content and process that will allow for linking sustainable development to sustainability are obtained. In addition, we draw on concepts, theories and approaches from various literatures including: strategic management (e.g. Graci and Dodds, 2010; Dodds, 2007; Strickland and Thompson, 2001); corporate social responsibility (e.g. Babiak and Trendsfilova, 2011; Lindgreen and Swaen, 2010; Blowfield and Murray, 2008; Moon, 2007); industrial ecology (e.g. Posch et al., 2011; Chertow and Miyata, 2010; Lenzen, 2008; Kohonen et al., 2004; Wolf et al., 2005; Deschenes and Chertow, 2004); and policy and tourism studies (e.g. Simão and Partidário, 2012; Robèrt et al., 2004; Kruijsen et al., 2012).

For the purposes of this research, the framework we have adopted is shown in Figure 1. It is divided into two parts: Part 1 consists of levels 1 and 2; and Part 2 consists of levels 3, 4 and 5. Part 1 encapsulates the vision and principles of sustainability, and Part 2 relates to the actions/activities/processes and strategies of the sector conducting the planning, that is, embarking on a process of sustainable development.

******* FIGURE 1 ABOUT HERE **********

How the strategy process, content and context, and the preceding theories and concepts, are applied within the proposed adapted framework will now be explored within the tourism accommodation sector in Grenada, or, in other words, in "an island context".

3.0 The case study: strategic planning in the tourism accommodation sector in Grenada

Generally, islands can be considered as an interaction of the three pillars of sustainable development. In this regard, an island can be viewed as the economy embedded within society, with both economy and society enclosed by the environmental system. Additionally, island systems can be viewed as complex systems, in which the three pillars of sustainable development are interacting in such a manner that the whole system may be difficult to understand. From these perspectives, islands can be viewed as a socio-ecological system, in which a socio-economic sub-system operates within the boundaries of the physical environment or ecological system of the island.

Robèrt et al. (2000: 4), propose "simplicity without reduction" as an innovative and scientifically sound approach to studying complex systems. In this approach, the idea is to first understand the basic principles that govern the functioning of the social and ecological systems. For example, the laws of thermodynamics which govern the ecological system must be understood. Moreover, the perspectives of the socio-ecological system presented in Section 2.0 also sharpen an understanding of the system. More importantly however, are what Robèrt and his colleagues (2004) refer to as principles of sustainability, which translates these laws and perspectives into practical and useable

principles that can serve as guides towards the vision for sustainability. These are encapsulated in Part 1of Figure 1.

Armed with these principles and a comprehensive understanding of the socio-ecological system, the adjustment of certain aspects of the system can now occur. As Broman et al. (2000: 4) suggest, simplicity without reduction is used: "out of respect for complexity, in contrast to ignoring parts of reality to (seemingly) reduce complexity". Therefore, it is fundamental that an analogous approach is taken in the island case, in which the sustainability of the island's socio-ecological system or island sustainability is first understood. This therefore requires that principles of sustainability that are appropriate for island sustainability are defined. It is proposed that only when these are known and understood that the process of sustainable development can be more meaningfully applied within the businesses in the socio-economic system of the island.

The island system can be further envisioned as a microcosm of the global system. In this regard, a transition towards global sustainability can be demonstrated in the island system. Deschenes and Chertow (2004: 203) proffer the "island context", which is: "an island system with scarce resources….that is subject to internal dynamics as well as pressures from the larger system in which it exists". Planning towards sustainability in such a system is extremely critical, and it also exemplifies the current state of the Earth, in the Anthropocene.

Therefore, bringing to bear the arguments presented in Section 2.0, the island system can be conceptualized as the exchange of MEW between the socio-ecological and socio-economic systems. These two systems relate to Part 1, the socio-ecological system, and Part 2, the socio-economic system, in Figure 1. In this regard, island sustainability principles (ISPs) that guide a vision for the sustainability of the island's socio-ecological system, were gleaned from the global sustainability principles proposed by Robèrt et al. (2004). The proposed ISPs are as follows:

- ISP 1: In a sustainable island system, the island system must not be systematically subjected to increasing concentration of materials extracted from the earth's crust.
- ISP 2: In a sustainable island system, the island system must not be systematically subjected to increasing concentrations of material created in society.
- ISP 3: In a sustainable island system, the island system must not be systematically subjected to degradation by physical means.
- ISP 4: In a sustainable island system, the people must not be subjected to conditions that systematically undermine their capacity to meet their own needs.

But drawing on the literature cited in Section 2.0, it is evident that island sustainability can be driven by policy decisions that may support or hinder island sustainability. Consequently, impacts from policy can be measured by indicators. In this regard, indicators can be developed from what Nijkamp and Vreeker (2000) refer to as a stimulus/response mechanism, where policy standpoints are stimuli, which may generate responses in the form of indicators, which can be used to measure the effect of the stimuli on the system. These indicators can then be strategically linked to the ISPs

in a matrix, which can be used by businesses to measure their contribution to island sustainability (see Figure 1).

The tourism accommodation sector of Grenada was used to illustrate how processes of sustainable development can be aligned to island sustainability. Grenada is approximately 344 km^2; has a population of about 110,694 persons; with an estimated GDP per capita in 2014 of approximately US$12,000 (CIA, 2015). Grenada's economy is dominated by services, which account for about 83.2% of the economy (CIA, 2015). Tourism plays a vital role in the services sector. Total tourist arrivals increased steadily up to 2009, when the global recession kicked in, at which point tourist arrival numbers began to decline (ECCB, 2013). In 2012, tourism accounted for about 20% of all employment in Grenada and arrivals considered in the context of visitor exports accounted for about 52% of all exports (WTTC, 2013).

Grenada therefore depends heavily on the sun, sea and sand with beach resort tourism playing a significant role in its economy. In 1997, the Government of Grenada noted however that such tourism "impacts most heavily on the environment", in terms of infrastructural development and physical facilities, resource use and waste generation (GOG, 1997: 97). Additionally, McElroy (2003) notes that Granada is one of the islands facing rapid growth and resource conflict. In a National Geographic Survey, Tourtellot (2007) reviewed the sustainability state of islands, suggesting that Grenada is in "moderate trouble". These observations highlight that Grenada may be in a sustainable/un-sustainable balance, and thus it presents an excellent opportunity to show how tipping the balance to sustainability can be planned. Further, the tourism accommodation sector exacerbates the need for scarce resources, such as water and energy, and also places additional pressure on the island's waste streams and carbon dioxide emissions. It follows therefore, that planning to reduce MEWFs in the sector can lead towards the vision of island sustainability.

4.0 Methods and results

4.1 Methods

The research methodology is predicated on the need to study MEWFs in an island context and so, following Baldacchino (2008), a more practical way of studying islands on their own terms has been sought. In this regard, Christensen and Mertz (2010: 280 citing Baldacchino) outlined that the study of islands should occur in the context of the "globalization of locality". This approach aligns with the island context as discussed earlier above. The methodology chosen has been designed to provide answers to a mix of qualitative and quantitative research questions. From this perspective, an epistemological stance was adopted that transcended the knowledge claims continuum of qualitative research and its interpretivism paradigm on one end and quantitative research and its positivism paradigm on the other (Feilzer, 2010).

By adopting a mixed methods approach we drew on the strengths of both qualitative and quantitative traditions, aiming to negate to some extent their individual weaknesses (Johnson and

Onwuegbuzie, 2004). A concurrent triangulation design and strategy did however give some priority to quantitative methods (Creswell, 2003). The approach included the creation of separate sampling plans for quantitative and qualitative data collection, but both sets of data were gathered simultaneously (Driscoll et al., 2007). A total of eleven organizations/individuals participated in the research.

For the qualitative strand of the research, the respondents were selected using a purposive strategy (e.g. Dodds, 2007: 53), with an initial selection of experts in academia, government, non-governmental organizations and the tourism sector, who were deemed to have specific knowledge about sustainable development (see Agarwal, 2011). This approach also took account of what Baumgartner and Korhonen (2010) refer to as strategy context, including all primary and secondary stakeholders, in formulating the strategy process and content. Conversely, proportional stratified sampling was used to select a quantitative sample. This was targeted at the tourism accommodation sector, which was required to provide data on their operations. A 17% response rate was achieved. Data was then collected using semi-structured interviews, guided by a questionnaire. The themes and sub-themes in Table 1 were translated into the questions that were used in the questionnaire and guided the interviews. The questionnaire was either emailed or delivered by hard copy to the selected sample, and respondents had the option of doing a face-to-face interview or to email their responses. Both responses gathered from face-to-face interviews and emailed responses were read and transcribed and where necessary, clarifications were sought with the respondents. From the eleven participants we had three that responded via email.

The qualitative data was coded and inductive analysis was used to ensure that emerging themes were captured (see Bryman and Bell, 2003). Based on the size of the sample, Excel was used to assist with the coding. The quantitative data were mainly calculated material quantities such as waste, fossil fuels and water. The consistency of the data provided by Likert scales was verified using the standard deviation. Both sets of data were integrated at the analysis stage to develop strategy process and content for planning towards island sustainability. Triangulation of this data with themes and sub-themes generated from the literature and research questions guided the development of the strategy process and content. The themes and sub-themes and their correspondence to the adapted framework in Figure 1 are summarized in Table 1. A presentation of the salient results and a discussion that illustrates the triangulation process are now presented.

****** TABLE 1 ABOUT HERE *********

4.2 Results and analysis

The key results from the data gathering process are presented in Table 2. The quantitative results consisted of the data gathered from Likert scales and binary questions and material inflows and outflows. The majority of respondents who responded to the “vision and goals for sustainability” theme agreed that the proposed ISPs (see Section 3.0) were necessary for leading towards island

sustainability. However, the issue of providing a process, for enhancing stakeholder participation and involvement, through further stakeholder engagement and consensus building, was highlighted. Respondent E05 reiterated:

> *"for agreement a….process plan [is] needed driven by information on the existing problems and the consequences of actions and non-actions".*

Moreover, participants felt that the proposed ISPs could put the island onto a path of sustainability. For example, respondent E03 noted:

> *" if we follow these four goals [principles]….Grenada will be on the path to sustainability".*

While respondent E08 was more specific and noted that:

> *"following these goals [principles] will help us control the amount of carbon dioxide that is emitted, it will help us cut down waste materials and aid in disposing [of] it properly".*

In addition,

> *"the goals [principles] will bring about better working conditions for employees".*

The other themes were targeted at the accommodation sector only. In this regard the material inflows and outflows estimated for the sample (see Table 2) presented an opportunity for the sector to reduce these flows. To do so, participants agreed on a proposed business vision that focused on social, environmental and economic wins or a triple win vision, in order to reduce MEWFs in their businesses. Participants generally agreed with the proposed vision and suggested that they were willing to incorporate the vision into their current company vision (or that the company's vision already focused on sustainability). For example, respondent E08 stated:

> *"What we do as a company affects our environment and the country as a whole so I see no problem in incorporating this sustainability vision in our current vision".*

While respondent E11 said that:

> *"the company vision already contained aspects of sustainability".*
>
> (This company had a comprehensive plan that focused on environmental and social issues)

With participants agreeing to the proposed ISPs and the need for a business vision that has a sustainability focus, they felt that the "vision and goals for sustainability" theme should form an important part of the SSPs. However, the need for a process to agree to the vision for island sustainability further indicates that key stakeholders should come together to find consensus on both the vision for sustainability and the ISPs. Moreover, there was also the need to ensure that the business vision is linked to this overall island vision, which will in turn ensure that the strategic

actions taken by the business are leading towards both the business and the island sustainability visions. In this regard, the first procedural step suggested by the research, is that of "visioning and vision linking" as shown in Table 3.

A similar approach was used for the remainder of the themes. In summary, the research participants agreed in principle that they should participate in both inter and intra-organization collaboration to reduce MEWFs. In this regard, the concept of a "tourism symbiosis" was proposed. Using the results shown in Table 2, the second procedural step suggested is "developing sector strategic actions", which is elaborated in Table 3. Finally, the research participants agreed that a matrix (see Section 3.0) was essential for ensuring that their implemented actions to reduce MEWFs were leading towards island sustainability (see Table 2). Also, it was found that the social and environmental focus of corporate social responsibility should be incorporated into a sustainability plan that can be used to implement all sustainable development actions (see Table 2). Therefore, by comparing these results with the themes in Table 1, it was finally proposed that the third procedural step be "monitoring and evaluation" (see Table 3).

****** TABLE 2 ABOUT HERE

5.0 The strategic sustainability procedures (SSPs)

5.1 Modelling the SSPs: focusing businesses on the socio-ecological system

Table 3 shows the SSPs, which essentially lay out a strategy process. They provide strategy content that the business can use for strategic planning focused on the socio-ecological system. One of the most important categories in the proposed SSPs is "visioning and vision linking". The involvement of key stakeholders to determine the island sustainability vision transcends the tourism industry. In other words, this overarching vision has to be developed and accepted by key islanders. For example, a vision can be: to reduce MEWFs whilst at the same time achieving and maintaining a high quality of island living, within the socio-ecological limitations of the island system. As presented in Section 3.0, this vision can be practically translated into the ISPs which can be easily accepted by stakeholders and which the tourism accommodation sector can use. These ISPs serve as a link between whatever the island vision may be and the internal vision and subsequent strategic actions of the tourism accommodation units.

******* TABLE 3 ABOUT HERE **********

******** FIGURE 2 ABOUT HERE **********

The ISPs therefore, are critical to linking the socio-ecological system to the activities that are occurring in the socio-economic system. In essence, they ensure that the operationalization of sustainable development within the business leads towards island sustainability, or even global

sustainability, with some degree of certainty. This is of course hinged on the fact that dematerialization of the economy is agreed by the key stakeholders, business and political leaders on the island and globally. How the ISPs serve to provide this link is demonstrated in the model in Figure 2.

At the core of the model are four symbols that represent the accommodation units surrounded by a symbol which represents an organization such as an electric utility company. As an example, these businesses are collaborating to reduce flows of energy required for electricity, in a proposed "tourism symbiosis". Reduction in electricity can be achieved through collective investments in energy efficiency and inter-connected renewable technologies on the electricity company's grid. As the accommodation units reduce the need for electricity generated by diesel, the need for diesel to be imported to the island is also reduced. The large double arrow going into the tourism symbiosis shows the reduction in diesel due to the actions of the accommodation units and hence the reduction in the quantity of diesel that crosses the island system boundary. This reduction action occurring in the tourism symbiosis is linked to the overall vision of the businesses to contribute to the triple win vision, which in turn contributes to the ISPs. To be more specific, it contributes to ISP1 for this example, and eventually to the island sustainability vision. These are represented by the arrows leading out of and upward from the tourism symbiosis.

The double arrow going out of the symbiosis represents the contribution of the tourism accommodation sector to reducing the island's carbon dioxide emissions, due to the reduction in the need for diesel. The impact of the reduction in diesel use can be measured using the indicators agreed to by the accommodation units. In this regard, the economic, environmental and social contributions to the ISPs and the island sustainability vision can be determined. The arrow leading out and downward from the tourism symbiosis and eventually into the island sustainability vision represents this connection in the model (see Figure 2).

5.2 The SSPs and implications for 'normal' strategy planning

Finally, the suggested strategy process can seamlessly align to the normal strategic management and planning processes as demonstrated in Table 4. In this table, the proposed SSPs are aligned with the five tasks of strategic management (Strickland and Thompson, 2001), the adapted FSSD (Robèrt et al., 2004) and the business planning process (taken from Simão and Partidário, 2012). These alignments demonstrate that the procedures for internalizing planning towards sustainability can occur within "normal" business activities.

Three key implications for planning at each procedural step, which are applicable to any business or sector, must be taken into consideration.

1. Visioning and vision linking is a critical part of the analysis stage of strategic planning. Stakeholder involvement is important to achieving consensus on the proposed ISPs. All of the key island stakeholders must agree to what governs island or global sustainability and the vision for the socio-ecological system. With effective stakeholder identification,

engagement and consensus building, this agreement can be reached. Moreover, the model further demonstrates how the strategic actions or sustainable development processes of the business can be aligned to the vision for sustainability. From this perspective, the case suggests a triple win vision (Table 2) for businesses or possibly a collective vision for the sector. In this regard, the process of sustainable development is aligned with the outward vision for sustainability, with some degree of certainty. This vision linking is a critical step for ensuring that the collaborative actions taken by the sector are leading towards the vision for sustainability.

2. Another key consideration for the application of the SSPs is at the action stage where strategy formulation and implementation occur. In this regard, the formulation of a tourism symbiosis or any other industrial symbiosis requires management decisions that span longer-term horizons (see Wolf et al., 2005). Here the concepts of industrial ecology come into play (see e.g. Posch et al., 2011; Korhonen et al., 2004; Korhonen, 2004) and as the results show there is strong support for inter-organizational collaboration, with notable advantages outlined (see Table 2).

3. A strategic approach must be taken to monitoring and evaluating progress towards the vision of sustainability. In this regard, the results show (see Table 2) that corporate sustainability (social and environmental), policy drivers of sustainability, and indicators, are important considerations. Corporate sustainability plans are critical for bringing the strategy content together. These plans should have the dual purpose of focusing attention on societal and ecological issues. A sustainability plan, which merges both environmental and corporate social responsibility, is key to ensuring that both sets of ssues are addressed simultaneously. Environmental, social and economic indicators, the ISPs and the operations of the tourism accommodation sector, or any other business, can be formulated into a matrix for measuring progress towards the vision (see Telesford, 2014). Indicator selection appropriate to islands was illuminated in McAlpine and Birnie (2004). Additionally, as was previously presented in Section 3.0, policy drivers stimulate the selection of these indicators, thus making them relevant to the social and environmental policies of the island. This approach therefore, provides a comprehensive monitoring and evaluation strategy that can provide feedback on how focused the strategy is on the socio-ecological system.

********* TABLE 4 ABOUT HERE *************

6.0 Conclusion and recommendations

To address the challenges posed by their high dependence on the socio-ecological system, this article has demonstrated how businesses can place more significant effort on strategic planning that focuses on this system. Moreover, the current state of the natural environment further requires businesses to focus renewed attention on the socio-ecological system. From this perspective, a set

of SSPs were proffered. The procedures "visioning and vision linking", "developing sector strategic actions", and "monitoring and evaluation", can assist businesses to focus on the sustainability of the socio-ecological system. In this regard, at the vision and visioning linking stage, the article concludes that key stakeholders should find consensus on such a vision. With this approach, the likelihood of all stakeholders owning the vision is improved. With such a collective ownership from the beginning, a successful strategic planning outcome is enhanced.

In addition, strategic planning must now accommodate a focus on the socio-ecological system, which is more often than not fixated on financial survival and success. The implications for this new focus may be minimal, for as the article has further revealed, the proposed procedures can seamlessly align with the normal strategic planning process. However, it is recommended that strategic planners make a concerted effort to incorporate these SSPs into the planning process. It is suggested that this can be inspired by a careful and thorough understanding of the socio-ecological system, and its associated challenges for the business. Moreover, the triple win vision of reducing MEWFs and improving the quality of life of people can further inspire the incorporation of the SSPs in to the strategy process.

To conclude, businesses are embarking on sustainable development activities and actions, through for example triple bottom line reporting. According to Joensuu et al. (2014), this has: "become one of the most important corporate responses to stakeholder demands". However, it appears as though these actions are leading towards an accomplishment or "arrival" (Ihlen and Roper, 2014) within the "walls" of the organization. This state of "arrival" does not augur well for the socio-ecological system, as humans, including business actions, plunge it further into the Anthropocene. To address this, it is further recommended that the SSPs proposed in this research are applied so as to bring businesses back to a position of "journeying" (Ihlen and Roper, 2014) towards a vision for sustainability, a role for business that is not only necessary for global sustainability, but even more so for the very success and survival of business itself.

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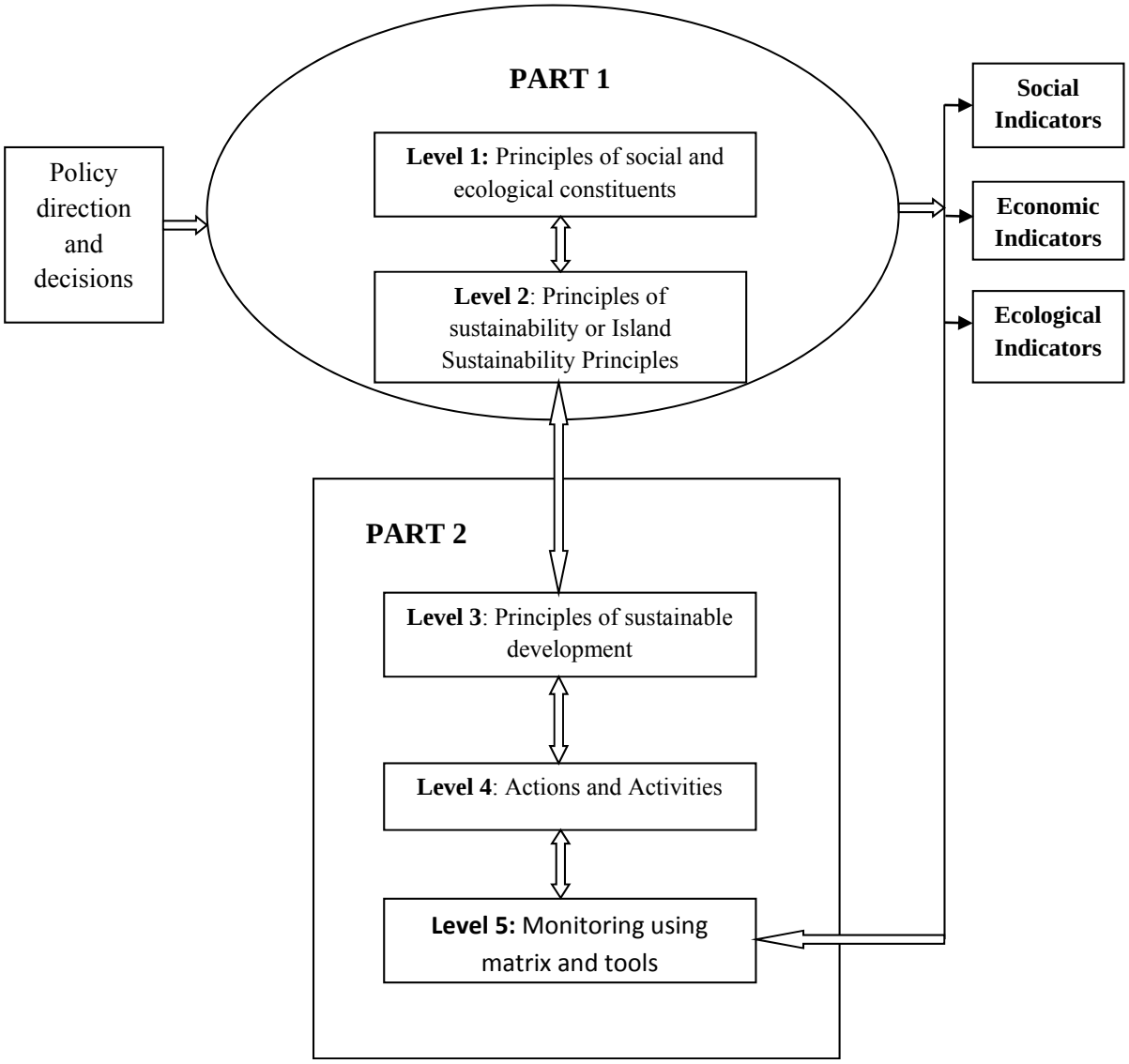
Figure 1: The adapted framework for strategic sustainable development (FSSD)



Author's re-conceptualization of the FSSD (Adapted from Robèrt et al., 2004: 30-45)

Table 1: Themes, sub-themes and the adapted framework

Levels of adapted framework	Themes	Sub-themes
PART 1 OF ADAPTED FRAMEWORK FOR STRATEGIC SUSTAINABLE DEVELOPMENT (FSSD)		
Levels 1 and 2	Vision and goals for island sustainability	Goals can address current and future generations needs
		Ease with finding agreement amongst stakeholders
		The creativity of the goals
		Adherence to goals leading towards island sustainability
PART 2 OF ADAPTED FSSD		
Level 3	Sector vision for island sustainability	Agreeing to triple win vision
Level 4	Actions of island sustainability	Actions for materials, energy and waste flows (MEWFs) reduction
		Intra & inter organizational collaboration
		Advantages/disadvantages of collaboration
Level 5	Monitoring the move towards island sustainability	Social responsibility
		Public policy
		Indicators

Author generated

Table 2: Key qualitative and quantitative results based on themes

Quantitative results	Qualitative results
Vision and goals for island sustainability	
1. The majority of the respondents agreed/strongly agreed with the proposed island sustainability principles (ISPs). 2. However, just over half of the respondents thought that it was not easy to find agreement with other stakeholders. 3. The majority of respondents thought that other sub-themes were very appropriate.	4. Need to provide a process for stakeholder participation and involvement in finding agreement with proposed ISPs.
Sector vision for island sustainability	
1. The majority of research respondents agreed with a proposed triple win vision.	2. General agreement maintained by research participants.
Actions for reducing material, energy and waste flows (MEWFs)	
MEWFs for the tourism accommodation sector: 1. Total Inflows: 33, 786,099 kg; consisting of: water, fossil fuels and other resources (e.g. food) in that order. 2. Total outflows: 27,434,212 kg consisting of: effluents, solid waste, emissions in that order.	3. Intra and inter organizational collaboration strongly supported. 4. Strong advantages for collaboration recorded, e.g. learning from each other; goals and actions can be accomplished faster.
Monitoring the move towards island sustainability	
1. Majority respondents felt that a strategic matrix was important to monitor the move towards island sustainability.	2. Two focuses of corporate social responsibility (CSR): social and environmental. 3. Policy was deemed to be a critical driver or hindrance to the move towards island sustainability. 4. Environmental, social and economic indicators suggested and agreed.

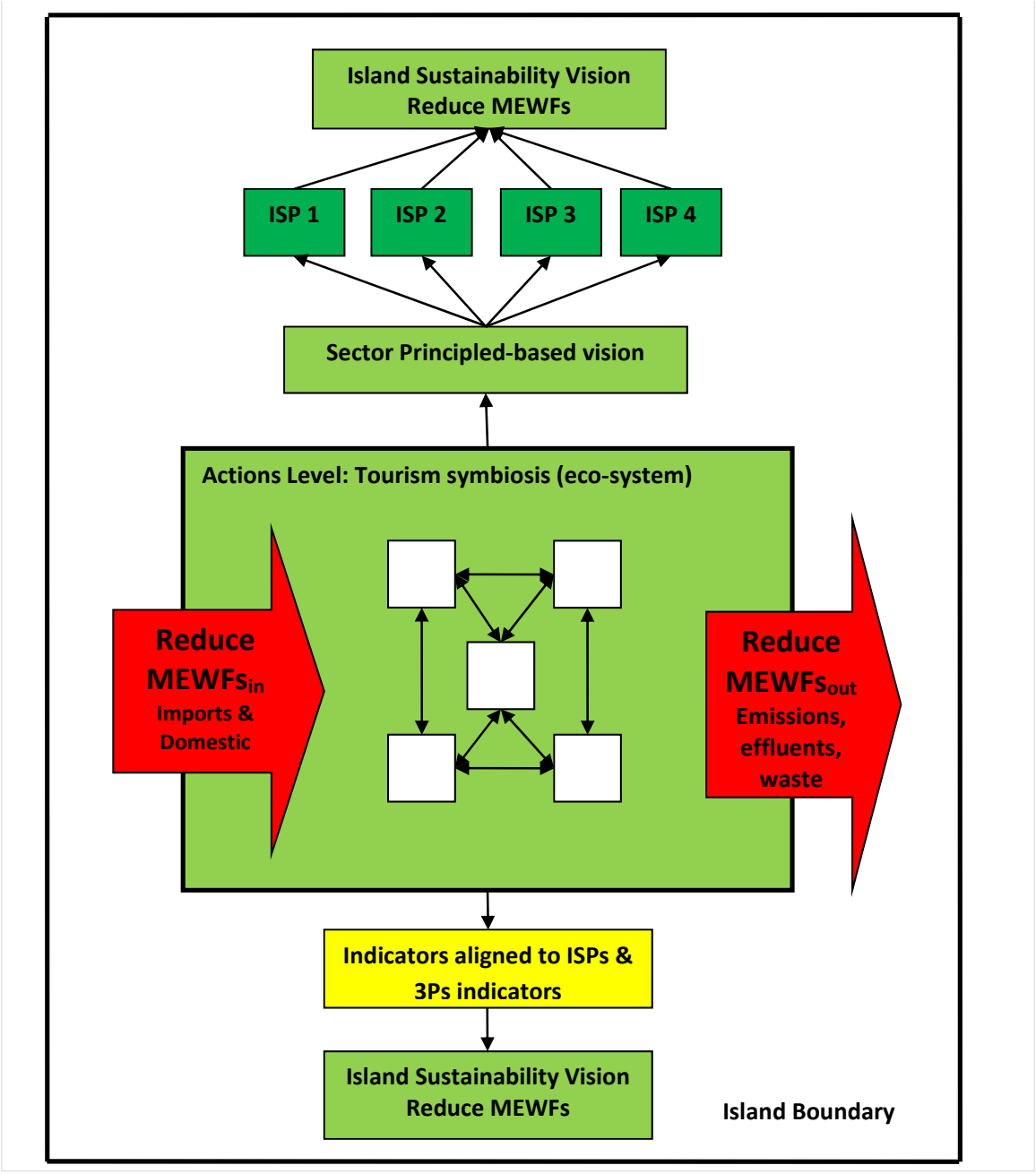
Author generated

Table 3: The proposed strategic sustainability procedures (SSPs)

Suggested strategy process categories	Suggested planned steps and strategy content
1. Visioning and vision linking	1. Develop an understanding of the island sustainability goals, using stakeholder participation and involvement 2. Craft a business vision for sustainability that is based on the island sustainability principles
2. Developing sector strategic actions	3. Conduct a material flow analysis for business and ensure business vision reflects intention to reduce flows (and social ills) 4. List and analyse current actions for reducing the flows (and social ills) 5. Attempt to uncover potential actions for reducing flows 6. Engage partners for possible inter and intra organizational collaboration
3. Monitoring and evaluation	7. Adapt matrix for monitoring results of actions 8. Select key indicators that are aligned to relevant policy (public and business) 9. Place indicators according to economic, social environmental 10. Create a sustainability plan 11. Monitor, record and adjust plan accordingly

Author generated

Figure 2: Modeling the strategic sustainability approach



Author's conceptualization (with inspiration from Sokka, Melanen and Nissinen, 2008)

Notes: ISP refers to Island Sustainability Principles as described in section 3.0. MEWFs refers to materials, energy and waste flows, with subscript s_{in} = inflows and s_{out} = outflows. 3P

refers to people (social indicators); profit (economic indicators) and planet (environmental indicators).

Table 4: Aligning the proposed strategic sustainability procedures to other strategy planning processes

Proposed procedures	Five tasks strategy management (Strickland and Thompson, 2001)	Adapted FSSD (Robèrt et al., 2004)	Other strategy planning procedures (taken from Simáo and Partidãrio, 2012)
Visioning and vision linking	Develop strategic vision and mission	Vision for island sustainability Island sustainability principles (goals)	Analysis Formulation
Developing sector strategic actions	Set objectives Create strategy to achieve objectives Implement and execute the strategy	Island sustainability principles (goals) Strategy (principles of sustainable development) Activities	Formulation Implementation
Monitoring & evaluation	Monitoring and evaluation	Monitoring and measuring	Performance evaluation

Author generated